Environment Canada

2007–2008

Departmental Performance Report

Jim Prentice

Minister of the Environment

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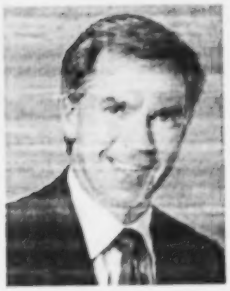
Section I – Departmental Overview

Minister's Message



As Minister of the Environment, I am pleased to present Environment Canada's Departmental Performance Report for 2007–2008. This report summarizes the achievements made in delivering the commitments from Environment Canada's 2007–2008 Report on Plans and Priorities.

Canada's natural environment is one of the most significant legacies that we must protect for our future. The Government of Canada takes this obligation seriously, and has made improving the quality of our environment one of its five main priorities. This report shows that Environment Canada has accomplished a great deal over this year, delivering real results on a number of issues of concern to Canadians.

Environment Canada takes the lead in delivering on the Government's environmental agenda. As such, the Department is taking action on key priorities such as sustaining Canada's natural capital, providing world-class meteorological and environmental services, and protecting Canadians and their environment from the effects of harmful substances. In 2007–2008, Environment Canada excelled in meeting its challenges head on and making real progress.

For example, during this past fiscal year the Government of Canada announced:

- details and significant steps to implement *Turning the Corner: An Action Plan to Reduce Greenhouse Gases and Air Pollution* — one of the toughest regulatory regimes in the world that will reduce greenhouse gases by 20% from 2006 levels by the year 2020 ;
- $85.9 million over four years to help combat the effects of climate change;
- $110 million to more effectively implement the Species at Risk Act over the 2007–2009 period;
- significant action and progress in implementing the Chemicals Management Plan aimed at improving the degree of protection against hazardous chemicals;
- $93 million to improve Canada's water quality under the Action Plan for Clean Water; and
- $43 million to put more than 100 new enforcement officers in the field across Canada and to provide them with new tools and investigative support to make polluters, smugglers and poachers accountable for breaking our environmental laws.

Environment Canada is providing Canadians with sound environmental policies that will help protect the health of Canadians and their environment not only today but for future generations. Thanks to the hard work and commitment of Environment Canada's staff, the Department is successfully delivering on one of the most significant and timely environmental agendas of our time. I am proud of the commitment and achievements of the Department this past fiscal year and look forward to the continued efforts that will help better protect our environment.

The Honorable Jim Prentice, P.C., Q.C., M.P.
Minister of the Environment

Management Representation Statement

I submit for tabling in Parliament, the 2007–2008 Departmental Performance Report for Environment Canada.

This document has been prepared based on the reporting principles contained in the *Guide to the Preparation of Part III of the 2007–2008 Estimates: Reports on Plans and Priorities and Departmental Performance Reports*: This document

- adheres to the specific reporting requirements outlined in the Treasury Board Secretariat guidance;
- is based on the Department's Program Activities Architecture and Strategic Outcomes, which were approved by the Treasury Board;
- presents consistent, comprehensive, balanced and reliable information;
- provides a basis of accountability for the results achieved with the resources and authorities entrusted to it; and
- reports finances based on approved numbers from the Estimates and the Public Accounts of Canada.

Ian Shugart
Deputy Minister of the Environment

Changes to Program Activity Architecture (PAA)

The diagram below highlights the changes that were made to Environment Canada's Program Activity Architecture (PAA) since the 2007–2008 *Report on Plans and Priorities* (RPP).

Environment Canada required amendments to its previously approved PAA to reflect the order in council transferring responsibility for the Toronto Waterfront Revitalization Initiative (TWRI) from the President of the Treasury Board to the Minister of the Environment.

This transfer of responsibility is reflected by the addition of a fourth Strategic Outcome and two underlying Program Activities.

Environment Canada Program Activity Architecture 2007–2008
1. Canada's natural capital is restored, conserved and enhanced
1A. Biodiversity is conserved and protected
1A1. Wildlife is conserved and protected
1A2. Land and landscapes are managed sustainably
1B. Water is clean, safe and secure
1B1. Aquatic ecosystems are conserved and protected
1C. Canadians adopt approaches that ensure the sustainable use of natural capital and working landscapes
1C1. Integrated information and knowledge enable integrated approaches to protecting and conserving priority ecosystems
1C2. Information, assessment and understanding of the state of ecosystem sustainability support decision-making
2. Weather and environmental predictions and services reduce risks and contribute to the well-being of Canadians
2A. Improved knowledge and information on weather and environmental conditions influences decision-making
2A1. Environment Canada has the environmental monitoring capability that allows it to identify, analyze and predict weather, air, water and climate conditions
2A2. Science is produced to support weather and environmental services, decision-making and policy development
2B. Canadians are informed of, and respond appropriately to, current and predicted environmental conditions
2B1. Environmental forecasts and warnings are produced to enable the public to take action to protect their safety, security and well-being
2B2. Canadians are better informed through improved weather and environmental services and leveraged partnership opportunities
2B3. Canadians benefit from the creation and use of meteorological and environmental information by Environment Canada and federal/provincial/territorial partners in support of programs of common interest
2B4. Environmental information and services empower Canadians to take action on environmental priorities
2B5. Adaptive strategies to address the impacts of climate change are developed and implemented for the benefit of Canadians and the environment
3. Canadians and their environment are protected from the effects of pollution and waste
3A. Risks to Canadians, their health and their environment posed by toxic and other harmful substances are reduced
3A1. Risks to Canadians, their health and their environment posed by toxic and other harmful substances are assessed
3A2. Risks to Canadians and impacts on the environment posed by toxic and other harmful substances are managed
3B. Canadians adopt sustainable consumption and production approaches
3B1. Canadians are informed of environmental pollution and are engaged in measures to address it
3B2. Sector-based and other approaches promote sustainable consumption and production
3C. Risks to Canadians, their health and their environment from air pollutants and greenhouse gas emissions are reduced
3C1. Risks from pollutants and greenhouse gas emissions are managed by a regulatory system for industrial sectors
3C2. Risks from air emissions are managed by regulatory systems for transportation and other sectors
3C3. Regulatory monitoring and reporting informs Canadians and decision-makers about air pollutants and greenhouse gas risks and trends
3C4. International collaboration on air pollutants and greenhouse gas emissions is consistent with Canadian interests
4. Sustainable urban development and infrastructure renewal in the Toronto Waterfront area
4A. Revitalization of the Toronto Waterfront
4B. Harbourfront Corporation
LEGEND
Strategic Outcome
Program Activity
Sub Activity
New in DPR 2007–2008

Please consult the Environment Canada's 2007–2008 RPP for the PAA crosswalk between 2006-2007 and 2007-2008.

Summary Information

Raison d'être

A number of acts and regulations provide the Department with its mandate and allow it to carry out its programs. Under the *Department of the Environment Act*, the powers, duties and functions of the Minister of the Environment extend to and include matters relating to

- the preservation and enhancement of the quality of the natural environment, including water, air and soil quality;
- renewable resources, including migratory birds and other non-domestic flora and fauna;
- water;
- meteorology;
- the enforcement of any rules or regulations made by the International Joint Commission relating to boundary waters; and
- the coordination of the policies and programs of the Government of Canada respecting the preservation and enhancement of the quality of the natural environment.

Additional authorities are provided in the other acts and regulations administered by the Department, including the *Species at Risk Act* and the *Canadian Environmental Protection Act, 1999*. For details on departmental legislation and regulations, please see www.ec.gc.ca/EnviroRegs.

Financial Resources

2007 –2008 ($ millions)		
Planned Spending	Total Authorities	Actual Spending
857.8	1,247.5	997.0

Human Resources

2007 –2008		
Planned	Actual	Difference
6454	6503	49

Totals may differ within and between tables due to the rounding of figures.

Departmental Priorities

	Departmental Priorities Stated in the 2007–2008 *Report on Plans and Priorities*	Type
1	Develop and implement innovative strategies, programs and partnerships to ensure that Canada's natural capital is sustained for present and future generations.	Ongoing
2	Provide Canadians with world-class meteorological and environmental information, predictions and services to ensure safety and to support economic activity.	Ongoing
3	Develop and implement innovative strategies, programs and partnerships to protect Canadians and their environment from the effects of harmful substances.	Ongoing

Please consult page 9 for discussion on progress toward meeting these departmental priorities.

Results Ratings Definitions – Overview

To improve clarity in performance reporting, Environment Canada has initiated a new approach to report on achievement of expected results in this year's Departmental Performance Report. For the first time, the Department is using visual ratings to illustrate the progress accomplished for each planned result stated in the 2007-2008 Report on Plans and Priorities.

These ratings are based on self-assessments performed by Environment Canada's management and supported by various levels of data robustness, some of which may be largely qualitative in nature. They reflect our best judgement of our performance at this time. This is a first step in the evolution of a strengthened performance measurement framework covering all of Environment Canada's programs. As our methodology and approach mature, our rating scale and measurements are expected to evolve as well.

While this DPR remains consistent with the reporting framework set in the 2007-2008 RPP, the upcoming 2009-2010 RPP will further demonstrate improvement on our departmental performance measurement framework. The objective of this framework is to provide clear, credible, balanced and demonstrable performance information for Parliament and the public on the planned results of the Department. Environment Canada is working toward bringing the framework to maturity within the next two years.

The table below provides succinct definitions of the results ratings used in this report.

- **Anticipated results met** – Objectives to achieve expected results were fully met
- **Anticipated results mostly met** – Objectives to achieve expected results have not yet been fully met, but significant progress has been made towards achieving them.
- **Anticipated results not met** – Objectives to achieve expected results were not met.

Overview of Program Activities by Strategic Outcome

Program Activities	Planned Results as per 2007–2008 RPP	Performance Status	2007–2008 ($ millions) RPP Planned Spending	2007–2008 ($ millions) Actual Spending	Contributes to the Following Priority
Strategic Outcome 1 : Canada's natural capital is restored, conserved and enhanced					
Biodiversity is conserved and protected	➢ Wildlife is conserved and protected	○ *Details p.19*	126.0	199.9	
	➢ Land and landscapes are managed sustainably	○ *Details p.20*			
Water is clean, safe and secure	➢ Aquatic ecosystems are conserved and protected	○ *Details p.21*	80.0	102.0	
Canadians adopt approaches that ensure the sustainable use and management of natural capital and working landscapes	➢ Integrated information and knowledge enable integrated approaches to protecting and conserving priority ecosystems	○ *Details p.22*	30.8	46.3	1
	➢ Information, assessment and understanding of the state of ecosystem sustainability support decision-making	● *Details p.24*			
Strategic Outcome 2 : Weather and environmental predictions and services reduce risks and contribute to the well-being of Canadians					
Improved knowledge and information on weather and environmental conditions influences decision-making	➢ Environment Canada has the environmental monitoring capability that allows it to identify, analyse and predict weather, air, water and climate conditions	○ *Details p.30*	126.2	146.8	
	➢ Science is produced to support weather and environmental services, decision-making and policy development	● *Details p.31*			
Canadians are informed of, and respond appropriately to, current and predicted environmental conditions	➢ Environmental forecasts and warnings are produced to enable the public to take action to protect their safety, security and well-being	○ *Details p.32*	156.8	157.8	2
	➢ Canadians are better informed through improved weather and environmental services and leveraged partnership opportunities	○ *Details p.33*			
	➢ Canadians benefit from the creation and use of meteorological and environmental information by Environment Canada and federal/provincial/territorial partners in support of programs of common interest	○ *Details p.34*			
	➢ Environmental information and services empower Canadians to take action on environmental priorities	● *Details p.35*			
	➢ Adaptive strategies to address the impacts of climate change are developed and implemented for the benefit of Canadians and the environment	○ *Details p.36*			

Totals may differ within and between tables due to the rounding of figures.

Program Activities	Planned Results as per 2007–2008 RPP	2007–2008 ($ millions) Performance Status	RPP Planned Spending	Actual Spending	Contributes to the following Priority
Strategic Outcome 3 : Canadians and their environment are protected from the effects of pollution and waste					
Risks to Canadians, their health and their environment posed by toxic and other harmful substances are reduced	➢ Risks to Canadians, their health and their environment posed by toxic and other harmful substances are assessed	● *Details p.44*	181.0	133.1	3
	➢ Risks to Canadians and impacts on the environment posed by toxic and other harmful substances are managed	● *Details p.45*			
Canadians adopt sustainable consumption and production approaches	➢ Canadians are informed of environmental pollution and are engaged in measures to address it	○ *Details p.46*	26.5	58.0	
	➢ Sector-based and other approaches promote sustainable consumption and production	● *Details p.47*			
Risks to Canadians, their health and their environment from air pollutants and greenhouse gas emissions are reduced	➢ Risks from air pollutants and greenhouse gas emissions are managed by a regulatory system for industrial sectors	○ *Details p.48*	130.5	107.9	
	➢ Risks from air emissions are managed by regulatory systems for transportation and other sectors	○ *Details p.48*			
	➢ Regulatory monitoring and reporting informs Canadians and decision-makers about air pollutants and greenhouse gas risks and trends	● *Details p.49*			
	➢ International collaboration on air pollutants and greenhouse gas emissions is consistent with Canadian interests	● *Details p.49*			
Strategic Outcome 4 : Sustainable urban development and infrastructure renewal in the Toronto Waterfront area					
Revitalization of the Toronto Waterfront	The purpose of the Toronto Waterfront Revitalization Initiative (TWRI) is to revitalize the Toronto waterfront through investments in both traditional city-building infrastructure, such as local transportation and sewers, and more contemporary urban development, including parks, green spaces, tourisms-related facilities and the rebirth of underutilized post-industrial areas. Key expected results from this initiative include: increased accessibility to and usage of waterfront area, revitalized urban infrastructure, and improved environmental management of the Toronto waterfront area. 2007-2008 was a transitional year for TWRI as the program moved from the Treasury Board Secretariat of Canada to Environment Canada. Although progress was made in waterfront revitalization, these programs were not reported on in either departments' Reports on Plans and Priorities.			40.2	
Harbourfront Corporation				5.0	
	See details on p.50				
TOTALS			**857.8**	**997.0**	

Totals may differ within and between tables due to the rounding of figures.

Summary of Departmental Performance

Operating Environment

Environment Canada has a leadership role in the implementation of the Government's environmental agenda. In 2007–2008, the Department's policies aligned to implement environmental initiatives announced in Budget 2007 to deliver on commitments made in *Turning the Corner: An Action Plan to Reduce Greenhouse Gases and Air Pollution*[1] and commitments made in the 2007 *Speech from the Throne.*

The Government continues to strengthen its commitment to improving the quality of our environment by making this issue one of its top five priorities.[2]

The Department is strongly committed to achieve value for money and effectively manage its resources on several key initiatives simultaneously. This involves a mix of ongoing, short-term and one-time funding. In 2007–2008, significant resources had to be allocated to new initiatives, and the departmental budget regime had to be revised mid-year by senior management to institute a number of special control measures to manage pressures within the Department's parliamentary appropriations.

Priority programs were maintained with critical areas receiving the financial flexibility required to maintain programs and services, such as the Canadian Wildlife Service and the Meteorological Service of Canada.[3]

The Department introduced measures to respond to challenges, priority setting, planning and program delivery to minimize adverse impacts on results.

In response to the Clerk of the Privy Council's initiative on public service renewal, Environment Canada has begun to integrate human resource planning into the departmental business planning process. This integrated approach continues to build on lessons learned from previous planning cycles and Management and Accountability Framework assessments from TBS.

Environment Canada is responsible for ensuring compliance with the environmental acts and regulations it administers–in particular, those aimed at preventing pollution and protecting wildlife. In 2007–2008, there was greater emphasis on regulation and enforcement programs than in previous years, and the Department increased its investment and expertise in those areas accordingly.

Science continues to play a fundamental role in enabling Environment Canada to deliver on its mandate by informing environmental decision-making and regulations and supporting the delivery of services to Canadians. To ensure that the Department has access to the science it needs, it continued to implement its long-term Science Plan. The Plan encourages the integration of science within the Department and collaboration with partners outside the Department. The Science Plan sets out a clear mission for Environment Canada's science over the next ten years. Work continued on the Department's Technology Plan as well, which, upon its completion, will be integrated into the Science Plan.

Strategic Context

Canadians believe that all levels of government and the private sector must do their part in order to make real, tangible progress to effectively address environmental issues.[4] Environmental issues such as air quality, changing weather and climate patterns, water quality and quantity, wildlife and habitat conservation and protection, harmful chemicals and toxic substances can have adverse effects on the health of Canadians and the environment and are therefore too serious to ignore and need to be monitored.

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[1] *Turning the Corner: An Action Plan to Reduce Greenhouse Gases and Air Pollution*: www.ec.gc.ca/cleanair-airpur/Turning_the_Corner-WSF3084CB7-0_En.htm

[2] Speech from the Throne: Strong Leadership. A Better Canada. October 16, 2007, www2.parl.gc.ca/Parlinfo/Documents/ThroneSpeech/39-2-e.html

[3] Environment Minister John Baird Moves to Protect Environmental Programs: www.ec.gc.ca/default.asp?lang=En&n=714D9AAE-1&news=758A79A4-08DD-44D2-BE3C-5F913A273A54

[4] Canadians are critical of the country's environmental performance. Environics Poll April 11, 2007 : erg.environics.net/media_room/default.asp?aID=632

Environmental problems and solutions cut across public-private divides, international borders and federal, provincial, territorial and municipal jurisdictions. Progress can only be made by government and society working together at all levels, domestically and internationally. Key Environment Canada programs and strategies, such as *Turning the Corner: An Action Plan to Reduce Greenhouse Gases and Air Pollution*, the Action Plan for Clean Water, the Chemicals Management Plan, and the Natural Areas Conservation Program, depend on collaborative approaches and partnerships among different levels of government, private industry, environmental non-governmental organizations and other key stakeholders.

Environment Canada plays a key role in the Government's comprehensive ecoACTION Plan, which is making progress on preserving and enhancing our environment, improving the quality of our air, reducing greenhouse gas emissions and addressing the health effects of environmental contaminants. Indeed, under the general theme *Ensuring a Cleaner, Healthier Environment*, Budget 2008 included the following new measures[5]

- $500 million for investments to improve public transit that will contribute to cleaner air and reduce greenhouse gas emissions.
- $250 million for investment in three carbon capture and storage initiatives:
    - $240 million in trust for Saskatchewan to be matched by the province and industry for a full-scale commercial demonstration of carbon capture and storage in the coal-fired electricity sector;
    - $5 million to be matched by Nova Scotia to support a geological research project examining the potential for carbon storage in the region; and
    - $5 million to the Institute for Sustainable Energy, Environment and Economy at the University of Calgary to examine economic and technical issues.
- An increase in the capital cost allowance rate for carbon dioxide pipelines to reflect the useful life of this equipment and provide certainty of tax treatment for companies planning investment;
- $66 million over two years to implement binding national regulations on greenhouse gas emissions and air pollutants across all major industrial sectors;
- $21 million over two years to support the enforcement of Canada's tough environmental laws by increasing the effectiveness of environmental enforcement officers with better forensics laboratory support, data collection, analysis and management systems;
- $10 million over two years for scientific research and analysis on biofuels emissions to support the development of regulations and demonstration projects to verify that new blended renewable diesel is safe and effective for our Canadian climate and conditions;
- $2 million over two years to protect biosphere reserves;
- an expansion of the accelerated capital cost allowance for clean energy generation equipment to additional renewable energy and fuel-from-waste applications; and
- GST/HST relief for land leased to situate wind- or solar-power equipment for the production of electricity.

Progress and Performance Highlights

Over the course of 2007–2008, the Department's strategic investments in the following areas showed encouraging results.

Progress on Departmental Priorities

RPP Priority #1: Develop and implement innovative strategies, programs and partnerships to ensure that Canada's natural capital is sustained for present and future generations.

[5] The Budget Speech 2008: Responsible Leadership. February 26, 2008. www.budget.gc.ca/2008/pdf/speech-discours-eng.pdf

Performance Highlights:

- Budget 2007 allocated $110 million over the period 2007–2009 for more effective implementation of the *Species at Risk Act*.
- Budget announcements in 2007 and 2008 provided funding for an additional 38 enforcement officers for wildlife enforcement. In addition, the Wildlife Enforcement Program, with funding from the Canadian Space Agency, continued the Space for Habitat pilot project to test the ability of satellite-based and earth observation technologies to improve allocation of resources to high-priority habitat protection needs in Canada and to support wildlife enforcement officers in the field.
- In Budget 2007, the Government of Canada committed $93 million over the period 2007–2009 under Canada's "Action Plan for Clean Water" to improve the quality of water in Canada's rivers, lakes and oceans.
- The Priority Ecosystem Initiatives Management Framework (PEIMF) was developed in 2007–2008 to improve the relevance and long-term efficiency of the Priority Ecosystem Initiatives program. This framework aims to optimize integration of Environment Canada programs and activities, and to strengthen accountability and reporting.
- Recognizing the importance of a healthy and clean Great Lakes Basin Ecosystem for millions of Canadians, the federal government signed a new 3-year Canada-Ontario Agreement to ensure that both levels of government work collaboratively towards the protection of drinking water sources, understanding the impacts of climate change, and encouraging sustainable use of land, water and other natural resources within the ecosystem.

RPP Priority #2: Provide Canadians with world-class meteorological and environmental information, predictions and services to ensure safety and to support economic activity.

Performance Highlights

- Air Quality Health Index pilot projects were instituted in Toronto and extended to several municipalities in British Columbia in partnership with Health Canada, the provinces and municipalities.
- A high-resolution numerical weather prediction system is being developed to respond to specific needs of the Vancouver 2010 Winter Games, with a focus on predicting high-impact weather in mountainous terrain. This system should be operational in 2009.
- Weather and environmental forecasts and warnings continued to be produced 24 hours a day, all year round.
    - The *Audit of Contingency Plans for the Meteorological Service of Canada Weather Prediction Program* noted that while "the program has never been shut down, and forecasts have never been missed because of unforeseen events," there have been some instances of weather warnings not reaching the *Weatheroffice* website. This problem is dealt with through the ISO 9000 process.
- The Newfoundland and Labrador Weather Office re-opening was completed with the addition of a marine forecast and warning production program, thus fulfilling a commitment of the Government of Canada.
- Environment Canada's production systems for public and marine weather forecasts and warnings along with the atmospheric monitoring program achieved, in 2007–2008, certification under the ISO 9000 standard for quality management systems. Other programs, such as the hydrometric, the environmental emergency response and the air quality forecast and warning programs, are expected to obtain certification in 2008–2009.
- Environment Canada's Science contributes to the International Panel on Climate Change (IPCC) work. This work was recognized with the awarding of the Nobel Peace Prize in 2007. Twenty-seven atmospheric scientists from Environment Canada have contributed significantly to the success of the IPCC over the last 20 years.
- More accurate probabilistic forecast products were made available to clients. These

products are used for a wide range of decision-making and risk-reduction purposes (for example, for input into flood forecasting, for use by utilities, etc.). This is the result of an international collaboration between Environment Canada, the United States and Mexico, resulting in a seamless set of products available to all North Americans.

- Weather and water quantity data were made available to all users in real time. The Data Management Framework project strengthened data management and improved integrated data access for the Meteorological Service of Canada data sets.

- A first version of a new operational air quality forecast model (called GEM-MACH) was released in the spring of 2008; still in maturation, it currently has the capability of the model it replaces. The next step is to increase the level of science of GEM-MACH to the next generation of air quality models. In the future, this model for North America should evolve into a global air quality model.

RPP Priority #3: Develop and implement innovative strategies, programs, and partnerships to protect Canadians and their environment from the effects of harmful substances.

Performance Highlights

- In 2007–2008, the federal government announced *Turning the Corner: An Action Plan to Reduce Greenhouse Gases and Air Pollution* and made public the *Regulatory Framework for Air Emissions*, which set out the final regulatory framework, including emission reduction targets and compliance mechanisms.

- In December 2007, Environment Canada formally advised industry to submit air emissions data to the Government of Canada by May 31, 2008. This information will inform the development of the proposed regulations. Canada is committed to reducing GHG emissions by 20 percent by 2020 and 60 to 70 percent by 2050 from 2006 level.

- In 2007–2008, industry and other stakeholders were required to provide information on how they are safely managing and using 73 of the 193 chemical substances identified as high priorities for action under the Chemicals Management Plan. The 73 substances comprise the second to fifth batches in a series of 12 batches of high-priority substances that were identified following Environment Canada's world-leading categorization of domestic chemical substances in the fall of 2006. Environment Canada and Health Canada will assess the information they receive, along with that gathered from other sources, to decide on the appropriate actions required to protect the health of Canadians and the environment from these substances.

- In Budget 2007, the Government of Canada provided funding for an additional 68 enforcement officers for environmental enforcement.

- In May 2007, the House of Commons Standing Committee on Environment and Sustainable Development concluded in its report entitled *The Canadian Environmental Protection Act 1999(CEPA) – Five-Year Review: Closing the Gaps*, that the basic architecture of the CEPA 1999 is sound and that the Government's future focus should be on improving in the areas of knowledge and implementation. The Government tabled its interim response to this report in October 2007[6].

- With the release of *Rx: Strengthen and Apply Diligently* on March 4, 2008, the Senate Standing Committee on Energy, the Environment and Natural Resources emphasized that the basic architecture of CEPA 1999 is sound, and the Senate Committee highlighted the need for better implementation and enforcement.

- The third Canadian Environmental Sustainability Indicators (CESI) Report (feature report and highlights report) was released in collaboration with Statistics Canada and Health Canada. See p.83 for more on CESI and indicators of environmental sustainability.

[6] Available at cmte.parl.gc.ca/cmte/CommitteePublication.aspx?COM=10471&Lang=1&SourceId=221160

SECTION II: ANALYSIS OF PROGRAM ACTIVITIES BY STRATEGIC OUTCOME

Strategic Outcome 1: Canada's natural capital is restored, conserved and enhanced

Strategic context - What is the issue?

Land, fresh water and oceans, and the diversity of life they support are the basis for a healthy society and economy. They provide a vast array of services to society—including life-supporting natural processes that clean the air, purify the water, pollinate plants, absorb carbon dioxide, recycle nutrients, process wastes, prevent floods, control pests and replenish soils. The services provided by natural capital are often very expensive to replace or are irreplaceable.

Pressures from a growing population combined with an increasing demand for goods and services are resulting in the heavy demands on land and water in some areas. In turn, these are threats to the long-term viability of ecosystems and the services they provide. Also, the long-term effect of acid rain, industrial use of pesticides and other chemicals and the rising threat from global warming compound the pressures on already stressed ecosystems. Finally, the advent of globalization, along with the increased international movement of people and goods, is also contributing to the introduction of new diseases and invasive alien species, increasing the threats to wildlife and its habitat.

Water is emerging as a critical issue of the 21st century. Despite significant reductions in point source discharges of contaminants to Canadian waterways, other key sources of pollution remain, including emerging chemicals, many of which are hardly known.

The number of proposals for large natural resource development projects is forecast to increase significantly, particularly in areas that once were pristine wilderness. Decisions made by governments, industry and individuals determine how natural capital is used and managed. These decisions, in turn, affect the health of the ecosystem and its ability to provide these goods and services into the future.

What are we doing about it? How Environment Canada contributes to this Strategic Outcome

The activities performed by Environment Canada supporting this Strategic Outcome include the following areas of programming:

- protection and conservation of biodiversity, including wildlife and its land habitat;
- conservation and protection of aquatic ecosystems; and
- promotion and establishment of integrated approaches to protect and conserve priority ecosystems and to conduct environmental assessments.

Environment Canada's programs, services and initiatives to restore, conserve and enhance Canada's natural capital involve the building of shared strategies and partnerships for conserving Canada's wildlife, ecosystems, freshwater and wetland resources.

In March of 2008, the *Status Report of the Commissioner of the Environment and Sustainable Development* (CESD) identified key challenges and made recommendations for a number of activities included within this Strategic Outcome area. The Department accepts these recommendations and is providing concrete and targeted actions in response to issues raised in the report.[7]

[7] For further information on findings, recommendations and Environment Canada's responses to the 2008 Commissioner of the Environment and Sustainable Development (CESD) report, please consult the following link: www.oag-bvg.gc.ca/internet/English/parl_lp_e_901.html

Biodiversity, Wildlife and Habitat

The *Species at Risk Act* (SARA) was proclaimed in June 2003, and is one part of a three-part Government of Canada strategy for the protection of wildlife species at risk. This three-part strategy also includes commitments under the Accord for the Protection of Species at Risk and activities under the Habitat Stewardship Program for Species at Risk.

The Act recognizes that the responsibility for the conservation of wildlife in Canada is shared by federal and provincial/territorial governments. The federal government is responsible for terrestrial species found on federal lands as well as aquatic species and most migratory birds, while the provincial and territorial governments have primary responsibility for the other species. SARA also includes provisions for the protection of individuals belonging to federally listed wildlife species and for their critical habitats and residences.

Budget 2007 allocated $110 million over the next two years for more effective implementation of the *Species at Risk Act*. In 2007–2008, progress was made in a number of areas, including the further listings of species to be protected; the development of recovery strategies and undertaking of science in support of identification of critical habitat for important species like the woodland caribou; the development of a national framework and the signing of specific federal-provincial agreements to facilitate cooperation among involved jurisdictions.

At the global level, Environment Canada's International Trade in Endangered Species program is responsible for ensuring Canada's obligations as a signatory to the *Convention on International Trade in Endangered Species of Wild Fauna and Flora* (CITES) are met through the effective implementation of the *Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act* (WAPPRIITA).

This international program aims to protect global species from the risks posed by international trade. The program does this by controlling through permits, the import and export (and movement within Canada) of CITES-listed species; assessing and identifying Canadian species for CITES listing; and ensuring that international proposals to list species under CITES that include Canadian populations conform to the intent and rules of CITES.

In April 2007 it was announced that Canada had joined the international "Coalition Against Wildlife Trafficking" (CAWT). The Coalition aims to address the illegal trade of plants and animals, so that joining the Coalition complements Canada's commitment to CITES. In 2007-2008 Canada undertook some deliverables under CAWT in the areas of enforcement, building the partnership, and catalyzing political will. For example, Canada has shared species identification guides; built domestic capacity through the recruitment of wildlife officers; profiled CAWT and CAWT's issues internationally at the Convention on Biological Diversity and G8; and, actively recruited members to the partnership i.e. Chile and Mexico.

The Ninth Meeting of the Conference of the Parties to the Convention on Biological Diversity took place in Bonn, Germany May 19-30, 2008, which included a High-Level Segment, May 28-30. Environment Canada led Canada's participation, which included attendance by Prime Minister Harper and Environment Minister Baird at the opening session of the High-Level Segment on May 28. Following extensive discussions on a wide variety of biodiversity-related issues such as biofuels, protected areas, genetically modified trees, and ocean fertilization, Parties adopted thirty-seven decisions, which included a road map until 2010 for continuing negotiation of an international regime under the Convention on access to genetic resources and sharing of benefits arising from their use.

Budget 2007 announced $10 million over two years towards new protected areas in the Northwest Territories and Budget 2008 allocated an additional $5 million, bringing the total investment to $15 million over three years. Within the Department, an operational review has been taken of its protected areas, including measures that would more effectively monitor and report on the state of these areas to direct action, contingent on available resources.

Migratory birds are fundamental players in the functioning of living ecosystems that cleanse polluted air and water, reinvigorate soil, and contribute to a predictable and stable climate. Environment Canada's Migratory Birds Program

works to maintain healthy levels of migratory bird populations for present and future generations.

The Migratory Bird Program is responsible for implementing the Migratory Birds Convention signed with the United States in 1916, first legislated in Canada through the *Migratory Birds Convention Act, 1917*, then through *the Migratory Birds Convention Act, 1994*. Environment Canada achieves implementation through the following combination of activities which are designed to meet expected results: conserving populations, individual birds and their nests through continued conservation actions, stewardship, policy and enforcement of the Act and its regulations; protecting important bird habitats; minimizing other stressors that affect population status; and managing emergencies associated with migratory birds.

Aquatic Ecosystems

Environment Canada aims to restore, conserve and enhance Canada's aquatic natural capital by ensuring that Canada's water is clean, safe and secure and that aquatic ecosystems are conserved and protected.

Environment Canada works in collaboration with other federal departments, provinces and territories (individually as well as through the Canadian Council of Ministers of the Environment), science networks related to work on the environment, as well as the public (including non-governmental organizations, academia and municipalities). This collaborative work allows Environment Canada to share information; determine priorities for monitoring and research; provide timely and integrated scientific information and advice to decision-makers; build best management practices; and promote sustainable water management in Canada for the efficient use of Canada's water.

As announced in Budget 2007, the Action Plan for Clean Water includes new initiatives, including $48 million over 8 years to accelerate the cleanup of contaminated sediment in Great Lakes areas of concern; $30 million over 5 years to support the cleanup of Lake Simcoe; $18 million over 5 years to reduce pollution and restore the health of Lake Winnipeg; and $5 million toward an International Joint Commission study on the flow of water out of Lake Superior.

Integrated Approaches

In all, six priority ecosystem initiatives, namely the Northern Ecosystem Initiative, the Georgia Basin Action Plan, the Western Boreal Conservation Initiative, the Great Lakes Basin Ecosystem Initiative, the St. Lawrence Plan and the Atlantic Canada Ecosystems Initiative, have been developed in an effort to respond to the unique environmental and sustainability issues of targeted ecosystems. They are multi-stakeholder initiatives that promote and implement ecosystem management to maintain Canada's natural capital. To better manage and respond to the needs of priority ecosystems, Environment Canada has developed and is implementing the Priority Ecosystem Initiative Management Framework, which will add rigour to planning and managing ecosystem results by supporting rational choices of targeted actions in specific areas of the country and by improving accountability and reporting.

Recognizing the importance of a healthy and clean Great Lakes Basin ecosystem for millions of Canadians, the federal government recently renewed the Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem (COA) with the Province of Ontario. The 2007–2010 COA outlines 186 commitments to address the health of the Great Lakes, broadly categorized as cleaning up areas of concern, reducing harmful pollutants, improving water quality, conserving fish and wildlife habitat and improving land management practices within the Great Lakes Basin. The Agreement also identifies two new areas of enhanced cooperation: protecting sources of drinking water and understanding the impacts of climate change.

Are we succeeding? Progress against priorities stated in the 2007–2008 Report on Plans and Priorities *under this Strategic Outcome*

1. **Continue to implement the *Species at Risk Act* through a transparent, consistent and harmonized policy and program framework that involves stakeholders and includes both ecological and socio-economic considerations**

Progress

- In 2007–2008, the National Framework for Species at Risk Conservation was developed to support the Accord for the Protection of Species at Risk and the *Species at Risk Act* implementation by providing a set of common principles, objectives and overall approaches to facilitate cooperation among all jurisdictions. Environment Canada is currently leading the development of a suite of policies to support this framework, including clarifying the intent of authorities and provisions under the *Species at Risk Act*; establishing guiding principles for implementation of the Act; and clarifying the roles and responsibilities of various jurisdictions involved in species-at-risk protection and recovery.
- In 2007, the Government of Canada signed the Cooperation Agreement for the Protection and Recovery of Species at Risk in Québec with the Province of Québec and the Canada-Saskatchewan Agreement on Species at Risk with the Province of Saskatchewan in order to coordinate actions to protect and recover species at risk and their habitats. These agreements promote exchanging of information, increasing knowledge on species at risk and wildlife, and reducing duplication of effort.

2. Establish and strengthen strategic, federal, provincial, territorial and international partnerships to ensure obligations under the Convention on International Trade in Endangered Species of Wild Fauna and Flora are effectively addressed

Progress

- In 2007–2008, significant efforts were made to engage federal, provincial and territorial partners in Canada's preparations for the 14th Conference of Parties and subsequent Convention meetings. The strong joint federal, provincial, and territorial Scientific Authorities Working Group, advised by the Canadian Wildlife Director is actively engaged in preparing documented non-detriment findings for Canadian species regulated under the terms of the Convention.
- The Department also collaborated with federal, provincial and territorial Convention permit administrators and management authorities collaboratively to seek input on better designing the Convention permit delivery system in Canada.
- Internationally, Canada continued to represent the North American region, which also includes the United States and Mexico, on the Convention's Standing Committee, ensuring that the region was well informed on issues as they arose and that North America had a strong voice in Standing Committee decisions during and after the 14th Conference of Parties.

3. Improve the management of protected areas and seek opportunities to enhance protected areas networks

Progress

- Budget 2007 announced $10 million over two years towards new protected areas in the Northwest Territories; Budget 2008 allocated an additional $5 million, bringing the total investment to $15 million over three years.
- In the March 2008 *Status Report of the Commissioner of the Environment and Sustainable Development*, the Commissioner recommended that Environment Canada systematically assess its national wildlife areas and migratory bird sanctuaries to determine whether they are meeting the Department's criteria for protected areas and fulfilling their intended purpose. Environment Canada has undertaken an analysis of its protected areas, including identifying measures that would more effectively monitor and report on the state of these areas to direct action, contingent on available resources. An action plan with timelines is being prepared that will provide guidance on updating site management plans and site improvements.

- Environment Canada has begun the renewal of its policy on the regulation of activities in the Department's protected areas, initiated a regulatory review and strategy for amendments, made improvements on the way it collects information about its protected areas and started a review and update of the *Environment Canada Protected Areas Manual*.

- An additional 38 new officers in the field for wildlife enforcement was the result of Budget announcements in 2007 and 2008. In addition, the Wildlife Enforcement Program, with funding from the Canadian Space Agency, continued the Space for Habitat pilot project to test the ability of satellite-based and earth observation technologies to improve allocation of resources to high-priority habitat protection needs in Canada and to support wildlife enforcement officers in the field.

4. **Implement the North American Bird Conservation Initiative (NABCI) and, under the *Migratory Birds Convention Act, 1994*, establish a regulation for incidental take to ensure effective conservation of migratory bird populations while promoting sustainable economic development**

Progress

- The Department worked toward the establishment of a regulation for incidental take and has finalized a draft regulatory strategy. Additionally, work toward the development of nationally consistent bird conservation region plans was initiated.

- Implementation of NABCI in Canada during 2007–2008 consisted of limited conservation and management activities related to the four species groups: landbirds, shorebirds, seabirds and colonial waterbirds. Conservation action for these four species groups in Canada continues to be coordinated under four main programs and plans: the North American Waterfowl Management Plan; Partners in Flight for landbirds; the Canadian Shorebird Conservation Plan; and Wings Over Water for seabirds; and colonial waterbirds. All of these efforts have strong linkages with planning and conservation programs in North America and the United States in particular.

5. **Strengthen federal, provincial, territorial and international collaboration to address shared water priorities**

Progress

- In June 2007, the federal government and the Province of Ontario entered into a new 2007–2010 Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem (COA). The COA outlines how the governments of Canada and Ontario will co-operate and coordinate their efforts to restore, protect and conserve the Great Lakes Basin ecosystem. The COA also contributes to meeting Canada's obligations under the Canada-United States Great Lakes Water Quality Agreement, the binational agreement to restore and maintain the chemical, physical and biological integrity of the Great Lakes Basin.

- Budget 2007 identified $5 million in funding support for the first two to three years of the International Joint Commission's five-year International Upper Great Lakes Study to examine water levels on the upper Great Lakes. The Department is also providing ongoing scientific and technical expertise to the study, which will conclude in 2011. The Department also provided ongoing scientific and technical support to the IJC's international water management boards and continued its collaboration with provinces on the domestic water management boards.

- Two initiatives introduced by the Great Lakes Binational Executive Committee—the Lake Ontario Binational Cooperative Monitoring Initiative and the Coordinated Science Initiative—coordinated and focused Canadian and American monitoring efforts and research science carried out in the Great Lakes Basin.

- Through the Canada-Québec Agreement on the St. Lawrence, continued efforts were made in 2007–2008 to maintain strong

collaboration among stakeholders to address issues while respecting jurisdiction.

- The Department collaborated with government agencies and industry to address water quality issues under the Columbia River Integrated Environmental Monitoring Program, and worked with several government and First Nation agencies to study water management issues under the Canadian Columbia River Forum.
- Environment Canada collaborated with the Government of British Columbia and a broad network of partners to undertake the first comprehensive basin-wide water supply and demand analysis since 1974. Results of the study, which are expected in 2009, will be used by decision-makers and stakeholders to optimize water supply and demand, inform water licensing decisions and develop drought and water management plans.
- The Department partnered with Canadian and American academics, stak holder groups and science-based professionals from a range of disciplines at various levels of government on the Science Forum convened to characterize the current state of knowledge and knowledge gaps specific to nitrate contamination in the transboundary Abbotsford-Sumas Aquifer. Results of the forum will be shared with the wider community in efforts to develop a groundwater management strategy for the aquifer and to mitigate nitrate contamination.
- The Department developed plans in consultation with stakeholders and initiated work on the cleanup of Lake Simcoe; the reduction of pollution and restoration of the health of Lake Winnipeg; and the cleanup of several targeted areas of concern in the Great Lakes, including Hamilton Harbour, the Detroit River, the St. Clair River and the Bay of Quinte.
- The third Canadian Environmental Sustainability Indicators (CESI) Report on Water Quality (feature report and highlights report) was released in collaboration with Statistics Canada and Health Canada.
- Environment Canada collaborated on the *Great Lakes St. Lawrence Seaway Study* published in the fall of 2007 and co-leads with the U.S. Fish & Wildlife the chapter on environmental considerations. This study was co-chaired by Transport Canada and the U.S. Department of Transportation.

6. Implement an ecosystem approach to environmental management

Progress

- Collaborative work with partners on joint priority issues continued in all six priority ecosystem initiatives: the Northern Ecosystem Initiative, the Georgia Basin Action Plan, the Western Boreal Conservation Initiative, the Great Lakes Basin Ecosystem Initiative, the St. Lawrence Plan and the Atlantic Canada Ecosystems Initiative.
- The Priority Ecosystem Initiatives Management Framework (PEIMF) aims to optimize the integration of Environment Canada's Priority Ecosystem Initiatives program and activities, and strengthen accountability and reporting. The development of the PEIMF and the management review of existing ecosystems initiatives was carried out in the fall of 2007. This work reflects the recommendations made in the Georgia Basin Action Plan evaluation by Environment Canada's Audit and Evaluation Branch.
- Through the National Agri-Environmental Standards Initiative (NAESI), Environment Canada continued to meets its commitment to Agriculture and Agri-Food Canada in relation to providing environmental objectives and predicting environmental benefits gained through implementation of beneficial management practices. These tools will help implement an ecosystem approach to environmental management on agricultural landscapes. In 2007–2008, the NAESI completed approximately 90 draft environmental performance standards under the themes of air, biodiversity, pesticides and water. This work culminated with the

preparation of 15 draft scientific synthesis reports and one overarching policy-based report.

- As a response to the 2008 *Status Report of the Commissioner of the Environment and Sustainable Development*, Environment Canada and the Province of Ontario have committed to biennial progress reports on the remediation of areas of concern under the 2007–2010 Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem. Work has progressed towards clearly defining all necessary actions to remediate and de-list remaining areas of concern, including agreeing on who is responsible for carrying them out, by July 2008. Afterwards, negotiations will be carried out with all relevant partners (Ontario, local governments and other stakeholders) on a site-by-site basis as an addendum to existing Remedial Action Plans.

7. Take action, from an ecosystem perspective, to identify and begin to address the critical knowledge gaps limiting integrated decision-making that affects natural capital

Progress

- As a key deliverable under the Biodiversity Outcomes Framework approved by federal, provincial and territorial resource ministers in 2006, Environment Canada led the development of the Ecosystem Status and Trends report for Canada in collaboration with federal, provincial and territorial partners. Scheduled for completion in 2009, the report will provide a baseline for monitoring and assessing the state of Canada's ecosystems and will enable and inform the identification of areas of conservation concern.

8. Promote the use of ecosystem approaches in environmental assessment processes

Progress

- In 2007–2008, environmental assessment activities focused on identifying and initiating program delivery improvements to better position Environment Canada to promote broader, ecosystem-based approaches.

- As required under the *Canadian Environmental Assessment Act, 1999* and the *Species at Risk Act*, Environment Canada provided in 2007–2008 scientific and regulatory expertise to the environmental assessments of Vancouver 2010 Winter Olympics-related venues, facilities and supporting infrastructure, ensuring that potential adverse environmental effects are assessed and appropriately mitigated, and that adequate environmental management plans and monitoring programs are in place for these facilities.

Investment

Program Activities	Financial Resources ($ millions)			Human Resources (FTEs)		
	Planned Spending	Total Authorities	Actual Spending	Planned	Actual	Difference
1A – Biodiversity is conserved and protected	126.0	200.2	199.9	878	817	-61
1B – Water is clean, safe and secure	80.0	101.4	102.0	940	996	56
1C – Canadians adopt approaches that ensure the sustainable use and management of natural capital and working landscapes	30.8	52.6	46.3	237	351	113
Totals	**236.7**	**354.3**	**348.2**	**2055**	**2164**	**109**

Total may differ within and between tables due to the rounding of figures.

The discrepancy between the planned and actual spending for Program Activity *1A - Biodiversity is conserved and protected* is mainly due to a statutory amount of $70M provided to the Nature Conservancy of Canada, as well as transfers from Natural Resources Canada to Environment Canada for Point Pleasant Park and Stanley Park.

Program Activity 1A – Biodiversity is conserved and protected

Program Activity Description[8]

This Program Activity consists of the protection and recovery of species at risk; conservation, restoration and rehabilitation of significant habitats; and conservation of migratory birds. A primary vehicle for the achievement of results under this program is the formation of strategic partnerships for integrated management of Canada's natural capital, including the sustainable management of landscapes. Key principles in support of results under this program are the use of the best available science and the provision of regulatory certainty to stakeholders.

Performance against Planned Results

Planned Result	**Wildlife is conserved and protected**	**Performance Status** (see legend p.5) ○
Related activities and delivery mechanisms	Key activities include coordination and management of species at risk, international trade in endangered species; wildlife toxicology and disease; migratory birds; and national wildlife issues. Initiatives and activities in this program area flow from the legal obligations under the *Canada Wildlife Act* (CWA), the *Migratory Birds Convention Act, 1994* (MBCA 1994), the *Species at Risk Act* (SARA), the *Canadian Environmental Protection Act, 1999* (CEPA 1999), and the *Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act* (WAPPRIITA).	
Key indicators	**Progress made in 2007–2008**	
Improvement in the status of threatened and endangered species	• Listing of 36 species (20 endangered species, 5 threatened species and 11 species of special concern) to Schedule 1 of the Act during the 2007–2008 fiscal year, giving these endangered and threatened species immediate protection through prohibitions set out in the Act. • Development of 3 proposed recovery strategies for 3 species, 15 final recovery strategies for 15 species and 1 final management plan for 1 species, which were posted on the *Species at Risk Act* (SARA) Public Registry. These recovery strategies and management plans aim to establish recovery goals, objectives and approaches for the recovery of these species and assist in identifying specific measures and actions to effectively achieve those recovery goals. • In support of the Minister's obligations under SARA, the Department undertook a comprehensive critical habitat science review for Boreal Caribou, which brought together a team of leading boreal caribou biologists and landscape ecologists in North America to determine whether adequate information exists to identify critical habitat for this species and, if so, to develop a scientifically rigorous and transparent methodology to identify critical habitat. • Areas where planned objectives for 2007–2008 were not fully met primarily relate to the large number of species currently listed and being added under SARA. As a result, the Department continues to face challenges in meeting its prescribed timelines in relation to the posting of recovery strategies. The Department is establishing a quality management system for SARA. Also, it continues to build its capacity for the implementation of SARA, including for recovery strategies.	
Maintenance of healthy levels of migratory bird populations	• The highly successful management of healthy waterfowl populations and sustainable harvest continued with the United States with the establishment of the first bi-national harvest strategy for Black Ducks in eastern North America. • In accordance with the *Migratory Birds Convention Act*, migratory bird regulations were developed in support of a sustainable harvest of waterfowl.	

[8] As stated in Main Estimates 2007–2008

	• Implementation plans were produced for the prairie provinces that outline specific interventions designed to support the population and habitat goals of many breeding birds in prairie Canada.
No Canadian species are threatened from international trade.	• In 2007–2008, the Significant Trade Review process under the Convention on International Trade in Endangered Species of Wild Fauna and Flora did not identify any concerns with current levels of trade in listed species from Canada, suggesting that the international community has confidence that Canada's management of these species adequately addresses any potential threat posed by international trade. • In June 2007, at the 14th Conference of Parties, no species from Canada were identified as needing protection from the threat of international trade and thus needing to be proposed for listing in the Convention appendices.
For further information	Canadian Wildlife Service : www.cws-scf.ec.gc.ca/ Species at Risk Public Registy : www.sararegistry.gc.ca/

Planned Result	**Land and landscapes are managed sustainably** **Performance Status** (see legend p.5) ○
Related activities and delivery mechanisms	Key activities include: landscape conservation science and policy; protected areas management; conservation partnerships and programs; sustainable agriculture landscapes; biodiversity conservation and genetic resources policy.
Key indicators Percentage of conserved wildlife habitat area (km2) that is under direct Environment Canada protection or protected through departmental partnerships and influence	**Progress made in 2007–2008** • Environment Canada manages 51 national wildlife areas and 92 migratory bird sanctuaries encompassing 118,000 km^2. • There were 74 donations of ecologically sensitive land completed under the Ecological Gifts Program in 2007–2008, resulting in a total area addition of 53 km^2 of privately held land valued at $96.3 million being secured for conservation. • In 2007–2008 habitat protection activities under the Habitat Stewardship Program for Species at Risk resulted in the legally binding protection of 190 km^2 of habitat and in the non-binding protection of 2400 km^2 of habitat involving 1500 landowners. Moreover, habitat improvement activities have improved 160 km^2 of habitat as well as 260 km of shoreline involving more than 6000 people. • Work on the Ecosystem Status and Trends report for Canada is well advanced with federal, provincial and territorial partners. • Planned objectives for 2007–2008 under this key indicator were not fully met because the completion of a comprehensive protected areas strategy under the Protected Areas program was delayed. However, an analysis of Environment Canada's protected areas was completed that provides baseline information needed to complete the protected areas strategy and identify priorities.
For further information	Ecological Gifts Program: www.cws-scf.ec.gc.ca/egp-pde/ Habitat Stewardship Program for Species at Risk: www.cws-scf.ec.gc.ca/hsp-pih/ National Agri-Environmental Standards Initiative: www4.agr.gc.ca/AAFC-AAC/display-afficher.do?id=1209128121608&lang=e

Program Activity 1B – Water is clean, safe and secure

Program Activity Description[9]

This Program Activity is designed to provide science and policy leadership on water quality, quantity and use. Science under this program will be focused on monitoring and research to understand what is changing in aquatic ecosystems and why, and on providing science-based tools to empower Canadians to take action. Policy leadership will include developing a national water agenda in partnership with other government departments that identifies benefits and incentives for the sustainable use of water, and ensuring that Canadian water related interests are protected globally. Involvement in transboundary arrangements will focus

[9] As stated in Main Estimates 2007–2008

on ensuring that parties to water sharing agreements benefit from Canada's technical advice and monitoring information, and undertake measures to ensure compliance and meet their obligations.

Performance against Planned Results

Planned Result	**Aquatic ecosystems are conserved and protected**	**Performance Status** (see legend p.5)
Related activities and delivery mechanisms	Implementation of key federal water commitments; water science and technology integration; water management performance promotion; water quality and aquatic ecosystem monitoring and reporting; research on hydrology and the impacts of human activities and the effects of contaminants and other substances of concern on aquatic ecosystems and water resources; research and development on the conservation and remediation of water resources; science and technology support to water activities and water education and engagement.	
Key indicators	**Progress made in 2007–2008**	
Accrued economic, social and environmental benefits to Canadians through sustainable and productive use of water resources	• The Great Lakes Sustainability Fund provided funding and technical support for up to 35 projects that are addressing: (i) development of strategies to remediate contaminated sediments; (ii) rehabilitation of critical fish and wildlife habitats; (iii) implementation of rural non-point-source pollution controls and (iv) improved municipal wastewater treatment (combined sewer overflows, stormwater and sewage) through technology demonstrations and support for pre-implementation studies that prepare municipalities to apply for infrastructure funding • The 2007 Canadian Environmental Sustainability Indicators report on the Freshwater Quality Indicator was released in collaboration with Statistics Canada and Health Canada. Improvements to this year's report included enhanced geographic coverage of water quality index information with the addition of new monitoring stations used for reporting, a focus on key issues and the adoption of a watershed approach. • Under the Memorandum of Understanding for the Canadian Shellfish Sanitation Program with Fisheries and Oceans Canada and the Canadian Food Inspection Agency, Environment Canada conducted water quality monitoring and pollution source identification in shellfish harvesting areas in Atlantic Canada, Quebec and British Columbia (including areas for shellfish aquaculture) and submitted reports for classification recommendations for priority areas to the relevant Regional Interdepartmental Shellfish Committees (RISCs). • New scientific knowledge to improve understanding of the impacts of climate change/variability and land-use change on hydrology and ecology, including improved understanding of effects of climate on extreme hydrologic events (floods and droughts); understanding of the impacts of land-use change on the hydrology and ecology of land-use systems and the sustainability of wetland and riparian ecosystem; new approaches to interpreting and diagnosing multiple stressor effects on aquatic ecosystems (e.g. conduct mesocosm experiments to determine the effects of multiple insecticides on stream biota); new knowledge of the effect of hydroclimatic factors on diversity and invasive species in aquatic ecosystems; research in support of the International Polar Year initiative, including the assessment of Arctic aquatic ecosystems for biodiversity and ecological integrity; and better understanding and prediction of Arctic freshwater and nutrient flux.	
Access for Canadians to safe drinking water and protection of human health from water quality and quantity-related threats	• New research and techniques for the rehabilitation and conservation of water resources, including new knowledge for establishing nutrient objectives for aquatic ecosystems; contaminated sediment toxicity assessment with benthic invertebrates in several areas of concern in the Great Lakes; conservation of groundwater in rural and agricultural settings and assessment and remediation of groundwater under challenging conditions and in vulnerable areas (e.g. the Arctic); and new knowledge of industrial and urban impacts on groundwater (e.g., resource extraction, processing/refining, manufacturing); and new scientific/technical knowledge on improving best management practices for controlling urban stormwater quantity and quality. Evaluation of bench pilot and full-scale treatment technologies will be undertaken for the removal of emerging contaminants (i.e. pharmaceuticals and personal care products, brominated fire retardants) through collaborative studies with Environment Canada scientists, the Ontario Ministry of Environment, Agriculture and Agri-Food Canada and Canadian municipalities.	

	• New research on the impacts of contaminants and other substances of concern on aquatic ecosystems and water resources, including research on contaminants and the effects on the ecology of boreal, subarctic and arctic aquatic and marine ecosystems; determination of the pathways and processes of bioaccumulation and fate of airborne pollutants in arctic, temperate and tropical freshwater and terrestrial systems; isolation and identification of endocrine contaminants present in the aquatic ecosystem for bio-assessment; effects of pharmaceuticals and herbicide mixtures on free-living and attached algae and bacteria in aquatic ecosystems; and effects of nutrient enrichments on primary aquatic productivity and the ecology of cyanobacteria. • Areas where planned objectives for 2007–2008 were not fully met primarily relate to communication activities with stakeholders and the development of science plans and contribution programs on new initiatives in Lake Winnipeg, Lake Simcoe and cleanup of several areas of concern in the Great Lakes.
For further information	www.ec.gc.ca/water/

Program Activity 1C – Canadians adopt approaches that ensure the sustainable use and management of natural capital and working landscapes

Program Activity Description[10]

This Program Activity is designed to integrate departmental action on ecosystems, by aligning science, policy, and environmental assessment in a nationally consistent inter-jurisdictional approach to ecosystem management. A further feature of this Program Activity will be multidisciplinary studies assessing the state of priority ecosystems and identifying the required actions for restoration and conservation.

Performance against Planned Results

Planned Result	**Integrated information and knowledge enable integrated approaches to protecting and conserving priority ecosystems** **Performance Status** (see legend p.5) ○
Related activities and delivery mechanisms	Management: Development and management of agreements, grants and contributions agreements, policy development, partnership management, performance measurement and assessment, strategic communications supporting effective delivery of priority ecosystems. Community engagement and capacity development: activities related to supporting community groups in the development of local action plans that support effective delivery of Priority Ecosystems Initiatives. Integration: Advancing the implementation of an ecosystem approach for the Department, implementation of the Priority Ecosystem Initiative Management Framework, coordination of Priority Ecosystems Initiatives to achieve better integration and effectiveness amongst various initiatives; governance and policy coordination of oceans ecosystems. Action: Integrated implementation of activities and program that lead to the improvement of the state (environmental quality) of priority ecosystems across the country.
Key indicators Improvement in environmental indicators for priority ecosystems	**Progress made in 2007–2008** • The most recent *Overview of the State of the St. Lawrence River* (2008), established using indicators (water, sediments, riverbanks, biological resources and uses), indicates that the health of the St. Lawrence can be qualified as intermediate to good for several indicators. There is, however, for certain indicators some cause for concern (e.g. biological integrity, riverbank erosion). • For a third year, the implementation of the 2005–2010 Canada-Québec Agreement on

[10] As stated in Main Estimates 2007–2008

Establishment and/or maintenance of shared governance mechanisms	the St-Lawrence was carried out successfully and progress was made on the achievement of the 28 targeted results. • The *State of the Great Lakes 2007 Highlights* report indicated that the overall status of the Great Lakes ecosystem was assessed as mixed because some conditions or areas were good while others were poor. The trends of Great Lakes ecosystem conditions varied: some conditions were improving and some were worsening. • Environment Canada and the United States Environmental Protection Agency co-led a binational team of partners to track ecosystem indicators for a common understanding of the status of the Georgia Basin, Puget Sound area. The most recent update revealed that seven of nine indicators were either worsening or not improving substantially: population health; urbanization and forest change; shellfish; air quality; marine species at risk; toxics in harbour seals and marine water quality. • The 2007 *Review of the Canada-U.S. Great Lakes Water Quality Agreement* by the Great Lakes Binational Executive Committee was completed in October 2007 with the transmission of the official review report to the governments of Canada and the United States. The Government of Canada will be considering the review findings in determining the future direction of the Agreement. • The 2007–2010 Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem (COA) was signed in June 2007. The Agreement outlines how Canada and the Province of Ontario will co-operate and coordinate their efforts to restore, protect and conserve the Great Lakes Basin ecosystem and it also contributes to meeting Canada's obligations under the Canada-United States Great Lakes Water Quality Agreement. • Science-based recommendations on best management practices for boreal forests and their biodiversity were provided to forest managers through Western Boreal Conservation Initiative (WBCI) partnerships with the Sustainable Forest Management Network, forest industry, provincial governments, Aboriginal peoples and non-governmental organizations (NGOs). • The Alberta Biodiversity Monitoring Initiative, an Alberta-wide biodiversity monitoring program, was launched with support from WBCI. • Several Northern Ecosystem Initiative (NEI) projects made important contributions to Canadian involvement in circumpolar monitoring networks in the areas of caribou, water, contaminants and seabirds. Also, research from NEI-supported projects from the Yukon to Labrador are providing pan-northern insight into ecosystem issues and are well positioned to contribute to the development of a northern monitoring network. • On the West Coast, Environment Canada and Environmental Protection Agency Region 10 have developed a 2008–2010 Action Plan under the Environment Canada-United States Environmental Protection Agency Joint Statement of Cooperation, which deals with transboundary issues relating to the Georgia Basin and Puget Sound Ecosystem. This action plan, which will be finalized and signed by September 2008, aligns with the priorities reflected in the transboundary Coast Salish Gathering Environmental Action Plan and the State of Washington-British Columbia Coastal and Oceans Task Force Work Plan. • Long-standing partnership agreements were established, signed and maintained with Atlantic Coastal Action Program (ACAP) communities, ZIP (*zone d'intervention prioritaire*, or area of prime concern) committees along the St. Lawrence River, various Ontario Conservation Authorities along the Great Lakes, the Sustainable Forest Management Network (boreal forest), Northern organisations in the Territories and Quebec (Inuit Tapiriit Kanatami, Dene Nation, the Council of Yukon First Nations, Innu Nation, Cree Regional Administration, Naskapis and the Kativik Regional Government), as well as Coast Salish First Nations and the Fraser Basin Council. • Areas where planned objectives for 2007-2008 were not fully met primarily relate to networking and communication activities with partners which led to a decrease in community engagement and capacity building related to the ecosystem program.
For further information	Ecosystem Initiatives: www.ec.gc.ca/ecosyst/backgrounder.html

Planned Result	Information, assessment and understanding of the state of ecosystem sustainability support decision-making	Performance Status (see legend p.5) ●
Related activities and delivery mechanisms	Coordinate delivery of integrated departmental policy and program advice pertaining to environmental assessments through national and regional initiatives to consistently advance and implement environmental assessment policy, guidance and strategic approaches; inclusion of scientific expertise in decision-making for new activities and projects, within and outside Environment Canada; provision of expert advice to other government departments, proponents and stakeholders; and verification and reporting on Environment Canada's compliance with the *Canadian Environmental Assessment Act*.	
Key indicators	**Progress made in 2007–2008**	
Implementation of new management approaches in project environmental assessments and strategic environmental assessments	• Developed national environmental assessment (EA) policies, guidance and training to support more strategic and effective delivery of core EA statutory obligations. • Supported the Government of Canada's Streamlining of Major Natural Resource Projects Initiative.	
Availability of relevant and reliable information to assess ecosystem status and change	• Designed and commenced implementation of a geospatial data management project to support system-focused decision-making systems. • Continued to implement the NatureWatch monitoring network to detect early signs of ecological dysfunction. • Continued to implement the Circumpolar Biodiversity Monitoring Program to facilitate the coordination of an integrated, ecosystem-based approach to monitoring.	
For further information	Environmental assessment initiatives and directives: Major Projects Management Office: www.mpmo.gc.ca/documents-eng.php Cabinet Directive on Implementing the *Canadian Environmental Assessment Act*: www.ceaa.gc.ca/013/010/directives_e.htm Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals: www.ceaa.gc.ca/016/directive_e.htm	

Strategic Outcome 2: Weather and environmental predictions and services reduce risks and contribute to the well-being of Canadians

Strategic context - What is the issue?

Canadians are affected by environmental and weather conditions such as extremes in temperature and precipitation, variable lake levels, winter storms, hurricanes, tornadoes, droughts, floods, smog, sea ice, road icing and aircraft turbulence. These conditions affect our health and safety, our property, our businesses, the economy and the environment. Moreover, a growing population and a just-in-time economy have enhanced Canada's vulnerability to these conditions. As a result, Canadians must be able to take actions to limit negative impacts and optimize the opportunities.

Changing weather and climate patterns already affect important regional economies and entire economic sectors such as forestry, agriculture and fisheries, and further climate change could affect them severely. Canada's northern communities and ecosystems are particularly vulnerable and impacts such as melting permafrost and shrinking sea ice cover are already being observed. Strengthening our understanding of the impacts of climate change and how to adapt to its effects will help reduce the social, economic and environmental impacts of projected future weather extremes and climates on Canada.

Every day, communities, governments, industry and citizens make short-term and long-term decisions affecting their health, their wealth and the quality of the environment. While no one can prevent severe weather and other environmental events from happening, effective planning for the range of possible hazards and advance notice of impending dangerous conditions can significantly reduce the risks to Canadians and their businesses. This is why virtually every Canadian consults weather forecasts every day—for their safety and day-to-day decisions (e.g. to plan travel and recreation). However, as their interactions with the environment become more complex, Canadians, their governments and industry are increasingly seeking other types of environmental information, such as information about air quality. They also seek information on how they can affect the future of the environment and how the environment, present and future, will affect, negatively or positively, their livelihood and the economy.

The availability of timely, accurate observational data and forecasts is essential for decisions on how to adapt or react to the present and future (short-term and long-term) states of the weather, air quality, water levels and flows, and sea ice. This information, to be credible, must be based upon a strong scientific foundation. Data and science are also prerequisites for the development of sound environmental policy and regulations, like air pollution regulations, climate change policy and building codes, and for monitoring their effectiveness. In all, weather and environmental services help citizens, industry, communities and governments understand their vulnerabilities to weather conditions and enable them to take action to protect themselves and the environment, as well as to maximize their economic opportunities.

What are we doing about it? How Environment Canada contributes to this Strategic Outcome

Environment Canada recognizes the challenges that a changing climate and an increased vulnerability to high-impact events can create, and the resultant needs of Canadians—be they policy or decision-makers, business owners or individuals —for information that will help them make effective decisions regarding their health and safety, the economy and the environment. In response to these needs, Environment Canada provides, 24 hours a day, seven days a week, for all regions of the country, quality meteorological and environmental services—including warnings, forecasts for the short-to-very-long term, current and past observations, and other information.

The cornerstone of these services, as well as of policies dealing with how humans interact with the physical and chemical environment, is the ability to detect changes occurring in the atmosphere, hydrosphere (water) and cryosphere (ice and snow) and to understand why they are occurring so that future environmental conditions like weather, climate, air quality, ultraviolet radiation, water levels or sea ice conditions can be predicted reliably. Environmental monitoring and scientific research activities provide the capability to fulfil this requirement.

As part of an international effort to monitor and predict the state of the environment, Environment Canada operates, across Canada, an extensive network of facilities to systematically observe the weather (e.g. surface and upper air), water levels and flow, climate, air quality, ozone, sea-ice conditions and more. In addition to the traditional observing sites, it also operates a network of Doppler weather radars over densely populated regions and a lightning network for most of the country. The Department also augments its data and observations through a number of partner organizations in Canada and abroad. For instance, Environment Canada relies on imagery from foreign-owned satellites to supplement the data gathered from Canada's own satellite reception stations; also, the Department uses routine weather monitoring at airports produced by NAV CANADA.

To better understand the environment and benefit from such knowledge, we need to understand why certain changes are happening and how the environment will likely evolve in the future. This will provide important insights into the potential risks and opportunities this evolution may represent. To that end, the Department is also extensively involved in atmospheric research (modeling, development, assessments, etc.). This science has permitted the development of sophisticated computer models that are key tools for supporting a variety of public policy objectives and for producing useful weather, climate, water

quantity, air quality, sea-ice and other environmental forecasts for Canadians.

The Department's information on the past, present and future of the environment constitutes the cornerstone of various services, products and tools that allow Canadians to understand their risks, vulnerabilities and opportunities, in order to safeguard themselves, their property and businesses against high-impact environmental events, and to help them make better-informed socio-economic and environmental decisions.

Information is made available to Canadians through various channels. Of note is Environment Canada's www.weatheroffice.gc.ca website, which remained the most popular site of the federal government in 2007–2008. Its phenomenal growth continued in 2007, with 486 million users creating 19.6 billion hits which is more than double that of the previous year. This level of interest demonstrates the value Canadians attach to essential weather and climate information.

In addition, Environment Canada operates the Weatheradio Canada network, a national radio broadcast providing weather information and warnings— the only public system that can proactively alert or wake-up Canadians when conditions warrant— currently reaching 95% of the Canadian population. These services are further complemented by automated and cost-recovered one-on-one telephone services that answer approximately 45 million calls a year.

To help ensure that weather, environmental and atmospheric information reaches all who need it, Environment Canada also partners with key stakeholders, particularly media organizations. To support this important group of partners, Environment Canada maintains the National Service Office and a website specifically for the media. Moreover, mainly through its Warning Preparedness Meteorologists (WPM) program, Environment Canada proactively engages with emergency management organizations (EMOs) to provide timely information and advice before, during and after high-impact weather events, in support of decision-making to mitigate the negative effects of extreme weather or climate water related events. In support of public security objectives, emergency and crisis management responses, Environment Canada provides special information products and services such as forecasts for the transport of certain airborne disease, biological carriers and pests, and for the transport and dispersion of hazardous substances like pollutants, radioactive materials or volcanic ash.

Finally, Environment Canada collaborates with other stakeholders where there is mutual interest. These mutual endeavors, often involving cost recovery, yield benefits to all parties: the stakeholders can access Environment Canada's expertise in producing and disseminating forecasts, while the Department can maximize the use of its infrastructure while accessing additional data or resources. Some of the best-known collaborators include NAV CANADA, the provider of air navigation services; National Defence, for services to the military, including overseas missions; and Fisheries and Oceans Canada for ice services. Another is VANOC, the organizing committee of the Vancouver 2010 Winter Games, for the provision of meteorological support to the Games, which will lead to improved knowledge of meteorological processes in a coastal alpine environment.

Are we succeeding? Progress against priorities stated in the 2007–2008 Report on Plans and Priorities *under this Strategic Outcome*

1. **Provide Canadians with the information and services needed for effective decision-making that will reduce the impacts on society of hazardous weather and environmental conditions, through uninterrupted delivery and continuous improvement of essential Environment Canada services—with critical 24/7, real-time infrastructure support**

   - Improvements to essential services are based on solid science and high-quality environmental data within a quality management framework.
   - Weather forecasts, warnings and environmental information reach decision-makers, including information on past and future hazards and extremes to inform

emergency preparedness legislation and infrastructure design criteria.

- Environment Canada's obligations to provide weather and environmental services in support of the missions of other government departments, other levels of government and essential service providers continue to be met.
- Canadians understand, have access to and effectively use weather and environmental products and services.

Progress

- Production of weather and environmental forecasts and warnings continued uninterrupted. The Meteorological Service of Canada produced some 1.5 million weather forecasts, more than 15,000 weather warnings and some 400,000 aviation forecasts.
- The Newfoundland and Labrador Weather Office was brought up to full staffing and service levels. A marine forecast and warning program was instituted to go along with the public program begun the previous year. This fulfills a commitment from the Prime Minister.
- Improvements to the computer models underpinning all Environment Canada's forecasts and warnings were implemented, and the foundations were laid for ongoing improvements. In addition, improvements were made to the North American Ensemble Forecast System (NAEFS), resulting in better probabilistic forecast products, satisfying client demand for weather information to support decision-making and risk reduction. This is an international collaboration among Canada, the United States and Mexico that gives a seamless set of products for North America.
- Warning Preparedness meteorologists were actively involved in providing advice to provincial emergency management authorities regarding high-impact weather events such as spring flooding in British Columbia, Hurricane Noel in Atlantic Canada and tornadoes in southern Manitoba.
- Drought and humidex information was added to the Ontario hazards site. A new Atlantic regional site was unveiled in March 2008 (see www.hazards.ca).
- Specialized products (transport and dispersion model outputs[11]) are provided to lead response organizations in support of national and international mandated activities in preparation and response to incidents of environmental emergencies
- Environment Canada continued to collect weather and water quantity information from across the country. To ensure that domestic and international users of this data have access to the best-quality data, Environment Canada has implemented an ISO quality management system. The atmospheric monitoring program became ISO-certified in 2007–2008. The hydrometric monitoring program is expected to be registered in 2008–2009.
- Canadians are increasingly seeking weather and climate data, as is evident in the 20% annual increase in the number of visitors to the Archive on-line website. Further, the amount and types of historical data available on the Internet have steadily increased: for example, in 2007–2008, precipitation intensity, duration and frequency data were made available on-line for the first time. Engineers use this information to design large public-sector infrastructure projects like buildings, roads, bridges and sewage systems.

2. **Develop and implement an integrated environmental monitoring and prediction capability that meets the needs of the evolving environmental agenda**

- In collaboration with clients, understand the impacts of a changing environment—including the increasing frequency of high-

[11] Dispersion models are computer programs that use complex mathematical schemes to simulate how concentrations of air pollution particles or contaminants spread through the atmosphere.

impact events—on economic sectors, ecosystems and society.

- Ensure that clients have the scientific information and tools to implement adaptative solutions that minimize their risks and maximize their opportunities in ways that balance social, economic and environmental needs.

- Lead, nurture and enhance key national and international partnerships for improved leveraging of resources and access to new science, technology, expertise and new information sources.

Progress

➢ **Communicating and forecasting air quality**

The Air Quality Health Index (AQHI) is a new public information tool that, on a daily basis, helps Canadians protect their health from the effects of air pollution. This tool has been co-developed by Health Canada and Environment Canada, in collaboration with the provinces and key health and environment stakeholders. It allows people to make decisions to protect their health by limiting short-term exposure to air pollution and adjusting activity levels when air pollution is higher[12]. In 2007–2008, AQHI pilot projects were implemented in Toronto and several municipalities in British Columbia.

Environment Canada has had, since 2001, an operational atmospheric chemistry computer model to help forecast air quality. More recently, the Department has been developing a new-generation air-quality model. The first version of the new model was released in the spring of 2008; it is proving to be of equivalent quality to the current operational model. When fully functional, this will become the new operational air quality model that will be integrated with the routine weather prediction model. Eventually using this modelling platform, Environment Canada will be able to track and predict air quality globally to better understand the transport of pollution from outside of Canada. Finally, Environment Canada continues to collaborate with the provinces in providing daily air quality forecasts to over 80% of Canadians.

➢ **Emergency management**

Specialized modelling capacities under the federal government's security agenda were developed with National Defence funding. In addition, the Environmental Emergency Response section of the Canadian Meteorological Centre maintained its capacity to forecast where and how dangerous radioactive material could spread through the atmosphere in the event of a nuclear accident over the Americas. This activity supports the Comprehensive Nuclear Test Ban Treaty, Health Canada and the Federal Nuclear Emergency Plan, as well as the World Meteorological Organization and the International Atomic Energy Agency.

➢ **Climate change**

A total of 400 000 users accessed the Canadian Hazards web site (www.hazards.ca) for downloads of information on changing atmospheric hazards. A total of 750 000 user downloads were recorded on the Canadian Climate Change Scenarios Network website (www.cccsn.ca).

Environment Canada provided scientific guidance regarding the impacts of climate change and adaptation measures to several committees, such as the Canadian Commission on Building and Fire Codes, the Consortium Ouranos in Quebec, and the National Round Table on the Environment and the Economy.

➢ **Other ongoing partnerships**

Work continued on a high-resolution numerical weather prediction system developed to address specific needs related to the Vancouver 2010 Winter Games. The main focus is on predicting high-impact weather in mountainous terrain. While some early tests were done

[12] More information about the AQHI can be found at http://www-ec.gc.ca/cas-aqhi/

in support of World Cup events held at the Olympic venues last winter, this system will be fully operational in 2009.

Participation in the international NinJo Project Consortium (comprising the German, Danish, Swiss and Canadian meteorological services, plus the German military) continued in order to develop, in a cost-effective way, a new forecaster workstation technology that will advance forecast and warning production capacity and efficiency.

Other public and private organizations, such as the departments of National Defence, Fisheries and Oceans Canada, Foreign Affairs and International Trade, NAV CANADA, provincial emergency measures organizations, and others continued to rely heavily on Environment Canada's forecast and warning services to support their operations, particularly in cases of emergencies such as winter and summer storms, spring flooding, hurricanes, etc.

3. **Meet the future needs of Environment Canada with human resources, succession and infrastructure plans that are fully integrated into business plans to build capacity and address infrastructure integrity**

- Environment Canada has access to skilled personnel to meet its evolving needs.
- Employees contributing to weather and environmental services have ongoing training and development opportunities.
- Infrastructure is life-cycle-managed.

Progress

- A comprehensive People Plan was developed and is being implemented to ensure the Department can fulfill its future human-resources needs regarding weather and environmental services, and can address issues such as recruitment and retention, knowledge retention because of projected number of departures and retirements, and training and development.
- The Meteorological Service of Canada continued its long-standing meteorologist recruitment and career development programs.
- Emphasis was placed in understanding learning needs through conversations with staff and development of learning plans. The foundation for a succession plan was established with the identification of key positions and the launching of a mentoring initiative.
- Life-cycle management of observational network equipment continued to be implemented. However, obsolescence continues to be a challenge given the current network size, thus slowing the pace of implementation and increasing the risks of unplanned outages. An enhanced effort on network optimization and the development of strategies for sustainability has been initiated. A risk based life-cycle management approach will help ensure the health of the networks while respecting resource realities.
- Science plans were developed for the following:
  - a study to improve understanding of the physical mechanisms that cause severe weather in Alberta in order to improve forecast and warning performance; and
  - a comprehensive nowcasting (forecasting in quasi-real time) research program to support the upcoming Vancouver 2010 Winter Games.

Investment

Program Activities	Financial Resources ($ millions)			Human Resources (FTEs)		
	Planned Spending	Total Authorities	Actual Spending	Planned	Actual	Difference
2A – Improved knowledge and information on weather and environmental conditions influences decision-making	126.2	150.2	146.8	1066	1062	-4
2B – Canadians are informed of, and respond appropriately to, current and predicted environmental conditions	156.8	160.5	157.8	1462	1438	-24
Totals	**283.1**	**310.7**	**304.6**	**2528**	**2500**	**-28**

Totals may differ within and between tables due to the rounding of figures.

Program Activity 2A – Improved knowledge and information on weather and environmental conditions influences decision-making

Program Activity Description[13]

This Program Activity consists of environmental science and monitoring activities to detect hazardous conditions, to understand what is changing in the atmosphere (weather, climate, air quality and ultraviolet radiation), hydrosphere (water) and cryosphere (ice and snow) and why. A key benefit of results under this program will be to provide improved knowledge, information, and tools on weather and environmental conditions (e.g. a better understanding of the causes of severe weather, the mechanisms which transport chemicals through the atmosphere, the impacts of human activity on the atmosphere, and atmospheric science-based models). These benefits will support the development of policy as well as the delivery of environmental services.

Performance against Planned Results

Planned Result	**Environment Canada has the environmental monitoring capability that allows it to identify, analyse and predict weather, air, water and climate conditions**	**Performance Status** (see legend p.5)	○
Related activities and delivery mechanisms	Ensuring the acquisition, transmission, archiving and accessibility of weather, climate, hydrometric and other environmental observations essential to providing users with consistent, reliable data and information in a timely fashion. Partners include the World Meteorological Organization; the Global Earth Observation System of Systems (GEOSS); other government departments (National Defence, Parks Canada, Canadian Coast Guard, Agriculture and Agri-Food Canada, Canadian Space Agency); other levels of government (provinces, territories and municipalities); NAV CANADA; United States National Oceanic and Atmospheric Administration (NOAA); United States Geological Service; European Space Agency; and Canadian cooperative programs.		

[13] As stated in Main Estimates 2007–2008

Key indicators	Progress made in 2007–2008
Integrity of monitoring networks and of their operations (sustainable and affordable networks)	• Weather and climate observations continued to be captured with high reliability—e.g. more than 98% for upper-air measurements, more than 95% for the weather radar network. • Working with partners: hydrometric data gathering and sharing partnership with the provinces and territories ensures a quality and cost-effective hydrometric monitoring program. • Quality Management: Environment Canada received ISO certification for its Atmospheric Monitoring program and progress is being made towards certifying the Hydrometric Monitoring program, with certification expected in 2008–2009. • Good stewardship of Crown assets: the Life-cycle Management of the Upper-Air Monitoring program is being implemented. Contracts were signed to purchase equipment for this key network. In some areas of the network, however, technological advances have outpaced our ability to update our systems, requiring extensive and innovative patchwork solutions to keep this portion of the network running.
For further information	Climate Data On-line: climate.weatheroffice.ec.gc.ca/climateData/canada_e.html Real-Time Hydrometric Data: scitech.pyr.ec.gc.ca/waterweb/main.asp?lang=0

Planned Result	Science is produced to support weather and environmental services, decision-making and policy development	Performance Status (see legend p.5) ●
Related activities and delivery mechanisms	Delivering credible, relevant, integrated and usable environmental predictions, environmental knowledge, advice, decision-making tools and information. Partners include other government departments (National Defence, Fisheries and Oceans Canada, Transport Canada, Natural Resources Canada, Health Canada, Agriculture and Agri-Food Canada, Canadian Forest Service, Canadian Coast Guard, Canadian Space Agency, Natural Sciences and Engineering Research Council, Parks Canada); other levels of government; and international research agencies (United States National Centers for Environmental Prediction, United States Federal Aviation Administration, United States National Aeronautics and Space Administration (NASA), European Centre for Medium-Range Weather Forecasts, International Ice Patrol, International Ice Charting Working Group, Intergovernmental Panel on Climate Change, global climate modelling centres).	
Key indicators	**Progress made in 2007–2008**	
Science-driven improvements to quality and utility of weather and other environmental services, as expressed by accuracy and timeliness of forecasts and the degree to which environmental science influences policy development and decision-making	• In 2007–2008, research activities in global medium-range numerical weather prediction led to a significantly improved version of the forecast model. This model will become operational in 2009. Also an upgraded ensemble prediction system was implemented, which led to improvements in medium-range weather forecast capabilities. • A high-resolution numerical weather prediction system is being developed to respond to the specific needs of the Vancouver 2010 Winter Games, with a focus on predicting high-impact weather in mountainous terrain. This system should be operational in 2009. • In the spring of 2008, Environment Canada released the first version of the new operational air quality forecast model (the Global Environmental Multi-scale Model—Modelling Air quality and CHemistry); this version had a capability equivalent to that of the operational model used since 2001. The next step will be to have a level of science equivalent to that of the next generation of models. • A software package for assessing the impact of wind farms on radars was developed and transferred to operations. This procedure has now been applied to more than 50 wind farms in Canada. • There was continued development of latest generations of the coupled Canadian global climate model, with a focus on "Earth System" modelling, including feedbacks between climate and the biosphere, and the Regional Climate Model, which will be used to provide greater detail for assessing how a changing climate will affect Canada. • Thirteen Environment Canada atmospheric scientists, involved with climate models and climate projections, made significant contributions to the Intergovernmental Panel on Climate Change (IPCC) *Fourth Assessment Report*, for which the IPCC received the Nobel Peace Prize. Environment Canada provided the lead author of the Research and	

	Observations chapter of Canada's Fourth National Report on Climate Change (joint report from Environment Canada, Natural Resources Canada, Agriculture and Agri-Food Canada, and Fisheries and Oceans Canada); it produced *Ozone Science in 2007*, an assessment on the state of stratospheric ozone post-Montreal Protocol, and it led the development of an environmental mercury science and monitoring program to support the Clean Air Regulatory Agenda.
For further information	Atmospheric Science Assessment and Integration: www.msc-smc.ec.gc.ca/saib/index_e.html Canadian Centre for Climate Modelling and Analysis: http://www.cccma.bc.ec.gc.ca/eng_index.shtml International Polar Year: www.ec.gc.ca/api-ipy World Data Centre for Greenhouse Gases: gaw.kishou.go.jp/wdcgg World Data Centre for Aerosols: wdca.jrc.it Forecasts from the CHRONOS operational air quality model: www.weatheroffice.gc.ca/chronos/index_e.html

Program Activity 2B – Canadians are informed of, and respond appropriately to, current and predicted environmental conditions

Program Activity Description[14]

This Program Activity consists of making available relevant knowledge and information on past, present and future conditions of the atmosphere, hydrosphere and cryosphere, in response to the needs of Canadians, be they policy/decision makers, business persons or individuals, or others who require this information to deliver on Ministerial or federal responsibilities and obligations (e.g. NAV CANADA). Under this Program Activity, information on the state of the environment is disseminated by means of various services, products and tools allowing Canadians to safeguard themselves and their property against environmental hazards and to help them make better informed socio-economic and environmental decisions. Environmental information and outreach will empower Canadians to take appropriate action on protecting their environment. Partnerships, domestic and international, are critical to the success of these endeavours.

Performance against Planned Results

Planned Result	**Environmental forecasts and warnings are produced to enable the public to take action to protect their safety, security and well-being**	**Performance Status** (see legend p.5) ○
Related activities and delivery mechanisms	Identifying, predicting and informing all Canadians of changes in the atmospheric environment and of potential high-impact meteorological situations or events that have consequences for their safety and well-being. Partners include other government departments (Public Safety Canada, Health Canada, National Defence, Fisheries and Oceans Canada, Canadian Food Inspection Agency, Privy Council Office); provinces and municipalities; media; the general public; private sector; international organizations (World Meteorological Organization (WMO), International Civil Aviation Organization, Comprehensive Nuclear Test Ban Treaty Organization, Global Earth Observation); the United States and other G8 countries.	
Key indicators Quality and lead times of warnings	**Progress made in 2007–2008** • More than 15 000 weather warnings were issued by the MSC in 2007–2008. A working group has been established, through the ISO 9000 process for quality management, to develop a national warning performance measurement system. It is expected that reporting on weather warning performance will begin in the next reporting cycle. Achievement of expected result is therefore not yet available. • Management is not in a position to assess this key indicator at this point. The performance measurement system is still in development. Statistics on this key indicator are therefore not yet available.	

[14] As stated in Main Estimates 2007–2008

Accuracy of forecasts	• ISO 9000 Quality Objective #1: 89% of forecast day 1 maximum temperatures within plus/minus 3°C: this standard was met with an accuracy of 89.77 %, based on a sampling of 118 official observation stations across Canada. • ISO 9000 Quality Objective #2: Quality of Numerical Weather Prediction (NWP) products comparable or better than those of G8 countries: MSC NWP outputs generally ranked between 3rd and 6th, based on exchange of NWP verification data exchanged amongst the top 10 NWP centres globally (Canada, European Centre for Medium-Range Weather Forecasts, Germany, Japan, United Kingdom, United States, France, Australia, India and Russia)
Public satisfaction with quality as measured in surveys	• A national telephone survey of 4141 Canadians conducted in March–April 2007 found the following: - 80% of respondents (76% in 2002) said they usually or always obtained enough information in daily weather information to make the decisions they needed to make. - 75% of respondents (70% in 2002) said that at least most of the time they received sufficient notice to properly react to a warning about an approaching summer storm. - 84% of respondents (81% in 2002) said that at least most of the time they received sufficient notice to properly react to a warning about an approaching winter storm.
For further information	Weather forecasts, warnings and other information: www.weatheroffice.gc.ca/canada_e.html Meteorological Service of Canada: www.msc-smc.ec.gc.ca/contents_e.html

Planned Result	**Canadians are better informed through improved weather and environmental services and leveraged partnership opportunities**	**Performance Status** (see legend p.5)	○
Related activities and delivery mechanisms	Providing better access to and delivery of information; measuring performance; leveraging partnerships; and expanding the application of environmental prediction and information. other government departments (National Defence, Fisheries and Oceans Canada, Transport Canada, Natural Resources Canada, Health Canada, Agriculture and Agri-Food Canada, Industry Canada, Canadian International Development Agency, Canadian Space Agency, Parks Canada); other levels of government; private sector; weather-sensitive industry; media; academia; and the international meteorological community.		
Key indicators	**Progress made in 2007–2008**		
Level of satisfaction of public and weather-sensitive industries	• A national telephone survey of 4141 Canadians conducted in March–April 2007 found the following: - 84% of respondents in 2007 were satisfied or very satisfied with the accuracy of Environment Canada's weather information and services. A similar proportion (85%) of those identifying Environment Canada as the source of weather warnings were satisfied with their accuracy. - The levels of satisfaction with sun and cloud conditions predictions were about two thirds (66%) of respondents, with little seasonal variations. In 2002, findings indicated that closer to three quarters of respondents were satisfied (70 to 74%). • A survey of 116 media outlets conducted in February 2007 found the following regarding the media website for weather services: - Four out of five (80%) respondents were satisfied or extremely satisfied with the "my city" section (weather forecasts for their areas). Seven respondents out of ten (70%) expressed satisfaction with the real-time data section of the site. - Three out of four respondents (75%) were satisfied or extremely satisfied with the media website overall. 82% of television clients and 77% of radio clients expressed satisfaction.		
Improvements to key services for weather-sensitive economic sectors	• Consolidation of Environment Canada's 1-900 weather consultation service into two main call centres, serving over 30 000 clients looking for specific weather information. - Increasing usage by the media, agriculture and marine sectors. • Growth in the private-sector capacity to support meteorological products and services. - MSC has referred many requests for service to the private sector through the referral service of the Canadian Meteorological and Oceanographic Society (CMOS). Over 50 private-sector companies are now registered with the CMOS. • Significant increase in the use of Environment Canada data through MSC's free		

	datamart. - Over 300 registered accounts and 2000 sessions per day downloading bulk data on an operational basis supporting private industry. • Meteorological products and services such as lightning, precipitation and climate available to provincial ministries, public utilities and private enterprise.
Level of access to and demand for Environment Canada's products and services	• In 2007–2008, the National Inquiry Response Team received over 21 600 inquiries from members of the public, mainly via the Contact Us button on www.weatheroffice.gc.ca. This represents an increase of more than 5000 inquiries—about 30%—over to the previous year, in which about 16 500 inquiries were received. • Public access to real-time water-level data was reliable through the year with the number of daily accesses about 500% higher than the annual average in June during the time of critical high water on the Fraser River in British Columbia. • Climate information related to rainfall intensity, duration and frequency for over 500 locations was made available on-line. • Steps to modernize the current inadequate automated telephone service for delivering weather information progressed slowly and the intended action to launch a national 511 telephone service did not proceed.
Level of access to international monitoring data through initiatives such as the Global Earth Observation System of Systems (GEOSS) initiative	• GEOSS is helping to facilitate improved access to data through key partners also participating in the GEO/GEOSS initiative, including discussions and agreements with the United States, Europe, China, Brazil, etc. • Canada endorsed the Cape Town Declaration at the Group on Earth Observation (GEO) Ministerial Summit in November 2007—the declaration has several statements referring to data access, interoperability and standards. • GEOSS is also facilitating data access through the development of a GEOSS common infrastructure—Canadian technology is one of the three data access systems currently under review by the international GEO community. • Considerable progress is being made in the development of GEOSS data sharing principles; a white paper (mostly prepared in 2007–2008) was released to GEO members and participating organizations in June 2008—Canadian GEO members will provide a coordinated Canadian response.
For further information	www.earthobservations.org www.weatheroffice.gc.ca/canada_e.html www.msc-smc.ec.gc.ca/msc/contents_e.html media.weatheroffice.gc.ca/index_e.html (site requires registration)

Planned Result	**Canadians benefit from the creation and use of meteorological and environmental information by Environment Canada and federal/provincial/territorial partners in support of programs of common interest**	**Performance Status** (see legend p.5)	○
Related activities and delivery mechanisms	Providing partners with quality environmental information that allows them to improve the safety of their operations and maximize their efficiency. Partners include other government departments (Transport Canada, National Defence, Fisheries and Oceans Canada, Canadian Coast Guard (Fisheries and Oceans Canada), Canadian Space Agency, Canada Centre for Remote Sensing (Natural Resources Canada), Public Safety Canada; funding programs (e.g. SAR–New Initiatives Fund; Program of Energy Research and Development, Technology and Innovation); the WMO; international meteorological community; aviation industry, including airlines and airport authorities; United States National Defence; International Olympic Committee; sporting federations; and municipal governments.		

Key indicators	Progress made in 2007–2008
	• Responded to all statements of requirements in a timely fashion; in particular provided weather support to the troops in Afghanistan, did the Aerodrome Forecast for the Kandahar Airfield, and supported two major DND/CF Exercises in the Arctic (Op. Nanook and Op Nunalivut)
Level of satisfaction of partner and client organizations	• Client survey reviews are carried out on an annual basis between the MSC and NAV CANADA to ensure that the MSC is meeting NAV CANADA service expectations. Discussions on current and future performance targets have started. • Environment Canada did not achieve its desired level of client satisfaction in a formal rating by NAV CANADA. A number of steps are being taken to address deficiencies identified in the NAV CANADA supplier review.
Accuracy and timeliness of services measured against performance benchmarks	• Monthly terminal aerodrome forecast (TAF) quality statistics and 90-day reports generated monthly - by the 20th day of each month • Performance targets in the Ice Information Service Partnership Agreement with the Canadian Coast Guard were met and reported on during formal bilateral meetings.
For further information	Canadian Ice Service: ice-glaces.ec.gc.ca Weather forecasts and observations for aviation: www.flightplanning.navcanada.ca

Planned Result	Environmental information and services empower Canadians to take action on environmental priorities	Performance Status (see legend p.5) ●
Related activities and delivery mechanisms	Reaching out to Canadians with Environment Canada's science, knowledge and information in order to build their awareness; to inform and educate them about environmental issues, including actions they may need to take and influence others to take. Partners include EcoAction, the Biosphère, other government departments, schools, media, NGOs, industry associations and academia	
Key indicators	**Progress made in 2007–2008**	
Extent to which Canadians are able to use a variety of environmental data and information in their decision-making and have the motivation and tools to take action and to influence others to do so	• The Biosphère has transitioned from a regional museum to a national centre of expertise on environmental education and engagement, with a new national mandate to offer sound environmental information and educational services to Canadians. • New educational tools and services were developed, such as e-learning conferences and BioKits, and they targeted new areas such as eco-consumption, biodiversity, climate change and eco-energy. • The number of Biosphère visits increased twofold between 2006–2007 and 2007–2008, up from 52 000 in 2006–2007 to more then 100 000 in 2007–2008. • Also, more than 5,000 young people from across the country were reached using e-learning sessions on climate change, and some 4440 young people took concrete action in their community by participating in the Biosphère's *Adopt a River* program. • Since the creation of the EcoAction program in 1995, 1776 projects were completed. EcoAction provided $ 52,776,842 in funding for these projects. For every dollar that EcoAction invested in these projects, the recipients leveraged about three dollars from other sources. Also there are 175 projects that are currently under way and 127 projects that are either under negotiation or awaiting approval.	
For further information	www.biosphere.ec.gc.ca	

Planned Result	**Adaptive strategies to address the impacts of climate change are developed and implemented for the benefit of Canadians and the environment**	**Performance Status** (see legend p.5) ○
Related activities and delivery mechanisms	Research and development functions, undertaken in collaboration with academia and international agencies, on the effects of atmospheric change on various segments of Canadian society, and on how to mitigate, or adapt to, these effects. These functions support sound policy development and service improvements. Partners include other government departments, provinces, territories, municipalities, universities and the private sector.	
Key indicators	**Progress made in 2007–2008**	
Enhanced level of awareness and understanding by economic sectors, other government departments and other levels of government of their vulnerability to atmospheric change	• Fourteen Environment Canada atmospheric scientists, involved in understanding the social and economic impacts of climate change and developing adaptation strategies, made significant contributions to the Intergovernmental Panel on Climate Change (IPCC) *Fourth Assessment Report*, for which the IPCC won the Nobel Peace Prize. • A total of 400 000 users accessed the Ontario Hazards website (www.hazards.ca) to download information on changing atmospheric hazards. Environment Canada developed its atmospheric hazards and disaster website used for emergency management planning by municipalities and provinces as program resources permitted. Drought and humidex information was added to the Ontario hazards site. A new Atlantic regional site was unveiled in March 2008. However, other regional websites were delayed because of resource availability constraints experienced during the fiscal year. • A total of 750,000 user downloads were recorded on the Canadian Climate Change Scenarios Network National website (www.cccsn.ca). The CCCSN supports climate change impact and adaptation research in Canada and other partner countries by providing climate scenarios information from climate models from around the world and downscaling and other tools. The development of Regional scenario nodes is delayed because of resource availability constraints during the fiscal year. • Environment Canada did not hold any major scenarios workshops on climate change impacts and adaptation issues. Instead, the Department organized a national workshop on economics of weather, climate and climate change and ran small sessions, piggy backing on workshops organized by other government departments. • Environment Canada was elected Chair of the organizing committee for UN World Climate Conference-3. The last two UN world climate conferences had major international impacts, the first leading to the formation of the IPCC and the second, creating the UNFCCC.	
Reduction of Canada's adaptation deficit as measured by: • Reductions in the vulnerability to the built environment, human health and ecosystems • Reductions in the vulnerability and increased opportunities for economic competitiveness	• With partners, Environment Canada is developing methodologies to better understand the implications of climate change for Canada's critical infrastructure and its maintenance. Environment Canada provided scientific guidance on climate change impacts and adaptation science needs to several committees including the Canadian Commission on Building and Fire Codes, Canadian Standards Association Committees, National Round Table on Environment and Economy, Transportation Association of Canada, Conference Board of Canada, etc.	
For further information	Atmospheric hazards website: www hazards ca Canadian Climate Change Scenarios Network National website: www cccsn ca	

Strategic Outcome 3: Canadians and their environment are protected from the effects of pollution and waste

Strategic Context - What is the issue?

Toxics and other harmful substances pose considerable threats to the health and well-being of Canadians and have significant negative impacts on air, water and land. These substances may exert a direct or indirect harmful effect on animals, plants or humans, and, depending on their volume, nature and manner of release, may pose long-term risks to the environment.

There is evidence that some potentially hazardous chemicals are accumulating in humans and in our ecosystems—in lakes, rivers and wildlife. Due to global atmospheric transport and other pathways, the Arctic region, including the Canadian Arctic, is a major receptor of these pollutants and their associated effects.

There are strong links between air pollution (smog) and health problems—especially for the elderly, children and for those with respiratory and cardiac problems. A large number of studies show that air pollution can lead to premature death, increased hospital admissions, more emergency room visits and higher rates of absenteeism.

Scientific research shows that human activities (particularly the use of fossil fuels and the clear-cutting of forests) are accelerating the concentration of greenhouse gases in the atmosphere. As a result, the earth's average temperature is getting warmer. This could have far-reaching environmental, social and economic consequences.

Global temperature averages have risen 0.74°C over the last 100 years. In the November 2007 fourth assessment report of the Intergovernmental Panel on Climate Change, international scientists have projected that average global temperatures could rise by as much as 1.8°C to 6.4°C by the end of the 21st century. In Canada, average temperatures could rise by as much as 5°C to 10°C in some regions.

Total greenhouse gas emissions in Canada in 2006 were 721 megatonnes of carbon dioxide equivalent (MT of CO_2), a decrease of 1.9% from 2005 levels and 2.8% from 2003 levels. Overall, the long-term trend indicates that emissions in 2006 were about 22% above the 1990 total of 592 MT. This trend shows a level 29.1% above Canada's Kyoto target of 558.4 MT.

However, these recent decreases are likely to be temporary considering projected medium to long-term economic growth and potential oil sands expansion.

What are we doing about it? How Environment Canada contributes to this Strategic Outcome

Environment Canada is taking strong regulatory action to protect Canadians and their environment from the effects of greenhouse gas emissions, air pollution and toxic substances.

Two significant programs have been announced as part of the federal government's broad environmental agenda. They are:

- the Chemicals Management Plan; and
- the Clean Air Agenda.

A key component of the Department's work under this strategic outcome is the provision, to Canadians and decision-makers, of high-quality and timely information on pollutant releases, through user-friendly tools and products. Providing publicly accessible information on pollutants and their associated risks is a means by which the Department can promote the use of environmental information in market-based decisions to encourage and enable sustainable production and consumption.

Finally, Canada's domestic approach demonstrates its commitment to act on pollution and waste to the international community. Canada has been working as a part of multilateral efforts to ensure effective international cooperation on climate change.

Chemicals Management Plan

In December 2006, the federal government announced that it would invest $300 million in the new Chemicals Management Plan, which sets out a process to address substances that were in use before comprehensive environmental protection laws were created. Canada is the only country in the world to have categorized the thousands of chemical substances and will address the majority of these substances by 2020.

Canada's initial categorization resulted in the identification of approximately 4300 substances that will require assessments, by Environment Canada and Health Canada scientists, to determine their precise health and environmental risks and how those risks should be managed.

To date, through an initiative known as the "Challenge," Environment Canada and Health Canada have identified some 200 high-priority substances and are working with industry and stakeholders within a three-year timeframe to develop a sound management plan for these substances. Information received from industry, the world's scientific community, environmental and health groups and the public will all be used to decide what actions are to be taken for each of these chemicals to protect the environment and the health of Canadians. Environment Canada and Health Canada have also begun work on a strategy to examine the approximately 2500 medium-priority substances, and have completed a rapid screening approach to evaluate the 1066 substances that met the categorization criteria but have potentially low exposures.

Clean Air Agenda

Implemented in the fall of 2006, the Government of Canada's Clean Air Agenda (CAA) represents a part of the Government's broader efforts to address the challenges of climate change and air pollution. Budget 2006 and 2007 provided $1.9 billion[15] in funding over four years (2007-2008 to 2010-2011) for the CAA which incorporates the development of both regulation — through the Clean Air Regulatory Agenda — and programming to achieve measurable reductions in greenhouse gas emissions and air pollution.

The Government recognizes the need for a holistic approach to delivering measurable results for the benefit of all Canadians; therefore, to measure investments against results, a horizontal framework known as the Clean Air Agenda Horizontal Management, Accountability and Reporting Framework (CAA HMARF) was developed. This HMARF consolidates the 44 CAA programs that are delivered by 9 departments and agencies into 8 themes, each of which is championed by a lead department[16].

Environment Canada made tangible progress delivering its share of the Clean Air Agenda in 2007–2008. On April 26, 2007, the federal government announced Turning the Corner: An Action Plan to Reduce Greenhouse Gases and Air Pollution, and made public the Regulatory Framework for Air Emissions. In December 2007, a notice was published that required industries to provide Environment Canada with information about their emissions of air pollutants and greenhouse gases in 2006 for the purpose of establishing the baseline needed for the development of the proposed regulations. On March 10, 2008, the federal government published *Turning the Corner: Regulatory Framework for Industrial Greenhouse Gas Emissions*, which set out the final regulatory framework for the greenhouse gas elements in more explicit terms including the identification of final targets.

Through Turning the Corner, the federal government itself is also making investments in clean energy and transportation technologies in Canada, yielding reductions in the short term, as well as deriving long-term economic benefits from improved energy efficiency, greater competitiveness, more opportunity to sell Canadian environmental products and know-how abroad, and more jobs for Canadians.

The *Canadian Environmental Protection Act, 1999*

The *Canadian Environmental Protection Act, 1999* is the principal legal foundation for both the Chemicals Management Plan and the Clean Air Agenda. The Act and its administration must be reviewed by Parliament every five years to provide the Government of Canada with an opportunity

[15] Funding increased from $1.7 B to $1.9 B due to inclusion of $200M in additional funding for clean transportation initiatives.

[16] Further details on whole-of-government results accomplished under the CAA HMARF are provided under "horizontal initiatives" at http //www tbs-sct gc ca/dpr-rmr/2007-2008/index-eng asp

to assess the contribution of CEPA 1999 to the goals of pollution prevention; sustainable development; and federal, provincial, territorial and Aboriginal cooperation. The parliamentary review also gives Canadians an opportunity to provide feedback on how well they feel the Act is protecting their environment and health. In May 2006, the CEPA 1999 review was launched by two parliamentary committees, one in the House of Commons and the other in the Senate.

In May 2007, the House of Commons Standing Committee on Environment and Sustainable Development tabled its report, *The Canadian Environmental Protection Act, 1999 – Five-Year Review: Closing the Gaps*.

The general conclusion of this report was that the basic architecture of the Act is sound and that the federal government's future focus should be on improving knowledge and implementation.

The government tabled its interim response to this report in October 2007[17]. While this satisfied the government's obligation under the Standing Orders of the House of Commons to respond to a parliamentary committee report, the government committed to issuing a final response to the recommendations of the House of Commons and Senate Committees following a review of the recommendations of the Senate Committee report.

The Senate Standing Committee on Energy, the Environment and Natural Resources presented its report *Rx: Stregthen and Apply Diligently* on March 4, 2008. The report also emphasized that the basic architecture of the Act was sound and highlighted the need for better implementation and enforcement.

Information on Pollutant Releases

In the area of generating and collecting data on environmental pollutants and greenhouse gases (GHGs), the focus will be on developing a single-window reporting system. This system will enable the integration of various data collections supporting the Clean Air Regulatory Agenda (CARA) and foster improvement of air pollutants (AP) and GHG emissions estimation techniques and data quality.

Improvements to estimation techniques and the quality of data collected and generated will increase decision-makers' confidence with respect to using environmental data to set priorities, ascertain compliance and meet various domestic and international reporting requirements.

International Actions

Environment Canada has long been a contributor to the Government of Canada's international environmental agenda by advancing and sharing science and know-how, as well as through negotiations and policy dialogue in international forums.

In 2007, Canada and the United States started negotiations for an annex to the Canada-United States Air Quality Agreement aimed at reducing the cross-border flow of air pollution and its impact on the health and ecosystems of Canadians and Americans.

In August 2007, Canada hosted the third meeting of the Security and Prosperity Partnership of North America (SPP). Leaders met to discuss key opportunities and challenges facing North America and agreed that sustainable energy and environment were a key priority theme on moving forward.

In September, Canada hosted the international Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer, of the United Nations Environment Programme. Celebrating the 20th anniversary of the Montreal Protocol, the Minister of the Environment, on behalf of Canada, joined other countries in successfully agreeing to more aggressive timelines to eliminate hydrochlorofluorocarbons (HCFCs), used in refrigeration, air conditioning and foam blowing. This will be accomplished by advancing the freeze of HCFCs production and consumption by three years in developing countries, followed by an ambitious series of reductions leading to a phase-out 10 years sooner.

At the 13th Conference of the Parties (COP13) to the United Nations Framework Convention on Climate Change (UNFCCC) in Bali, the Parties agreed that the world should focus its attention on five pillars in order to achieve our goals in the fight against climate change:

[17] Available from: cmte.parl.gc.ca/cmte/CommitteePublication.aspx?COM=10471&Lang=1&SourceId=221160

1. A shared vision for long-term cooperative action, including a long-term global goal for emission reductions;
2. Enhanced national/international action on mitigation of climate change;
3. Enhanced action on adaptation;
4. Enhanced action on technology development and transfer to support action on mitigation and adaptation;
5. Enhanced action on the provision of financial resources and investment to support action on mitigation and adaptation and technology cooperation.

Canada is in agreement with those essential elements and is working towards successfully completing negotiations by the end of 2009 leading to a post-2012 agreement.

Canada also contributed to the implementation of the International Transaction Log (ITL) under the Kyoto Protocol. The ITL is the global, central clearinghouse for transactions of international greenhouse gas emission reduction credits under the Kyoto Protocol.

Canada's participation in the Commission for Environmental Cooperation (CEC) was evaluated in 2007–2008. The evaluation confirmed that Canada has played a positive role in leading the CEC towards a more focused and results-oriented cooperative work program that delivers on domestic and trilateral priorities[18].

Also in 2007, Canada entered into discussions to amend two existing protocols on transboundary pollution under the United Nations Economic Commission for Europe (UNECE) Convention on Long-Range Transboundary Air Pollution (LRTAP). The amendments are aimed at further strengthening the reduction of transboundary pollution of persistent organic pollutants (POPs) and air pollutants.

Canada also continued to take domestic action to implement its obligations under a number of multilateral environmental agreements For example, EC is engaged in international discussions on the global control of mercury.

[18] The evaluation of Canada's participation in the Commission for Environmental Cooperation (CEC) and management response are available from www ec gc ca/doc/ae-ve/CEC-CCE/toc_eng htm

Are we succeeding? Progress against priorities defined in the Report on Plans and Priorities 2007-2008 under this Strategic Outcome

1. **Continuing to implement the government's Chemicals Management Plan (CMP) to improve the degree of protection against hazardous chemicals by**

- assessing the approximately 200 substances identified as high priority under the categorization exercise, as well as developing and implementing risk management approaches and initiating the development of risk management instruments for the majority of these substances (known as "the Challenge");
- assessing the approximately 1250 substances that met categorization criteria but have potentially low exposures;
- starting to assess the approximately 2500 second-tier substances of medium concern; and
- developing a quality management system to ensure that decision-making under Environment Canada's statutory authorities is as consistent, transparent and predictable as possible.

Progress

Under the Challenge initiative, the government committed to complete within three years the risk assessment and management of the 200 highest-priority chemical substances that are potentially harmful to human health or the environment. In 2007–2008, Environment Canada and Health Canada kept pace with the timing requirements of this commitment.

- Starting in early 2007, the 200 highest-priority substances were grouped in batches of 15 to 30 focus substances. Following the posting of a batch, a six-month Challenge window was opened for industry to respond to two mechanisms for the

submission/collection of added data: a mandatory CEPA section 71 notice and a voluntary Challenge questionnaire.

- In 2007–08, batches 2 to 5 were launched, and industry and other stakeholders have responded well to the call for information, and for supplementary data for those batches where the comment period has closed.

- Taking into account information provided by industry, on January 19, 2008, Environment Canada and Health Canada released, for a 60-day public comment period, the draft screening assessment reports for the 15 substances in Batch 1 of the Challenge. Risk management scope documents were also released on the same date to initiate discussions on control strategies with industry and other stakeholders on the 12 substances that were proposed to be "toxic" as defined in section 64 of CEPA 1999.

Beyond the Challenge initiative, good progress was also achieved on the broader commitments of the Chemicals Management Plan (CMP):

- On March 8, 2008, a notice was published requiring facilities engaged in petroleum refining or bitumen/heavy crude oil upgrading activities to report information on 145 high-priority petroleum substances identified under the CMP. This information will inform screening assessment and risk management decisions.

- A rapid screening approach was used to evaluate 1066 substances that met the categorization criteria but have potentially low exposures. On June 23, 2007, the Environment Canada and Health Canada draft assessment report was released for a 60-day public comment period and proposed to conclude that 754 of the substances do not meet the criteria to be deemed to be "toxic" as defined under section 64 of CEPA 1999. As a result, Environment Canada and Health Canada propose to take no further action with respect to these substances at this time. The remaining 312 substances were identified for further assessment as part of the substances of medium concern.

- In December 2006, the Government of Canada began issuing significant new activity requirements under CEPA 1999. These now affect approximately 145 high-hazard chemical substances not currently in use in Canada. These notices mean that industry must provide data to be reviewed by Environment Canada and Health Canada before any of the chemical substances on the list can be re-introduced into Canada.

- Environment Canada's Quality Management System development and implementation continued in 2007–2008. Specifically, modules were developed to lay out the process and approval requirements for 1) risk assessment and risk-Management of existing substances under CEPA 1999 and as part of CMP activities; and 2) regulations developed within Environment Canada.

- In the *Status Report of the Commissioner of the Environment and Sustainable Development to the House of Commons* (2008), the Commissioner recognized the significance of the Chemicals Management Plan and indicated that "Environment Canada and Health Canada have developed clear objectives and timelines under the Chemicals Management Plan…"

Beyond the CMP, Environment Canada continues to fulfill its mandate under CEPA 1999 and the Fisheries Act in such priority areas as marine protection (disposal-at-sea regulations and management of risks to the aquatic environment from pulp and paper effluents and metal mining effluents); transboundary movements of hazardous waste; wastewater effluents and implementation of environmental management frameworks applicable to federal government activities and operations.

2. Undertaking research and monitoring to inform risk assessment and risk management priorities (also part of the Chemicals Management Plan).

Progress

- The development of a toxics research plan as well as a toxics monitoring plan was initiated in support of CEPA 1999, as

was a joint strategy and the coordination of activities relating to research of toxics.

- Research is being conducted on the presence, fate and discharge of a large number of priority substances, including brominated flame retardants (BFRs), pigments and dyes, pesticides and pharmaceutical products in municipal wastewaters and biosolids.

3. **Continuing to implement the federal government's Clean Air Agenda to reduce air pollution and GHG emissions, including:**

   - developing a framework and individual regulations for emissions of air pollutants and GHGs from each of Canada's main industrial sectors;
   - establishing emissions targets and compliance mechanisms for industrial sectors; and
   - developing regulations for emissions of air pollutants from the transportation sector.

Progress

The development and implementation of the federal government's evolving framework on air pollution and GHG emissions involved the following:

- On April 26, 2007, the federal government announced *Turning the Corner: An Action Plan to Reduce Greenhouse Gases and Air Pollution*, and made public the Regulatory Framework for Air Emissions.
- A notice was published December 8, 2007, requiring facilities that would be covered by the proposed regulations to report their 2006 emissions of greenhouse gases and air pollutants and other data.
- On March 10, 2008, the government published *Turning the Corner: Regulatory Framework for Industrial Greenhouse Gas Emissions*, which sets out the final regulatory framework, including emission reduction targets and compliance mechanisms.

In addition, the following measures support the government's Regulatory Framework on Air Emissions and its Clean Air Agenda

- Negotiation of a Memorandum of Understanding (MOU) with the Railway Association of Canada (RAC) that is consistent with U.S. EPA air pollution standards and that ensures that the rail industry continues to improve its greenhouse gas emission performance during the period 2006–2010.
- Contribution to the development of new international air pollution standards for ships. Draft regulations were proposed by the International Maritime Organization in April 2008. Final approval by the International Maritime Organization is expected in the fall of 2008.

4. **Continuing efforts to coordinate and improve the quality of emissions reporting, including**

   - working with the provinces and territories towards a single, harmonized system for mandatory reporting of all pollutant and GHG emissions; and
   - assessing and improving the quality of information reported to and contained in the National Pollutant Release Inventory (NPRI)and the emissions inventories for pollutants and GHGs.

Progress

- A multi-year project was initiated in 2007–2008 to work towards a single, harmonized system for mandatory reporting of all air pollutant and GHG emissions to Environment Canada programs as well as to other jurisdictions.
- Under section 46 of CEPA 1999, the NPRI collected and made publicly available information from over 9000 industrial facilities on their 2006 releases, disposals and recycling of over 350 pollutants.
- Information was collected on sources and sinks of greenhouse gases (GHGs) through the National GHG Inventory, and on emissions, trends and projections of air

pollutants through the Comprehensive Air Pollutant Inventories.

- The annual National Inventory of GHG emissions and removals estimates, trends analysis, quality assurance and verification activities was published. This forms the foundation of the Canadian Environmental Sustainability Indicators (CESI) GHG indicator, published annually. [19]
- The annual Greenhouse Gas Reporting Program data, collected from facilities that emit 100 KT or more of carbon dioxide or equivalent, was published in 2007–2008. [20]
- Efforts were initiated in 2007–2008 to upgrade the One-Window to National Environmental Reporting System (OWNERS) to an improved platform, with added functionality such as allowing expansion to additional partners. This system reduces the administrative burden on facilities reporting to multiple programs and jurisdictions, as well as streamlining data collection efforts for governments. OWNERS collected 2006 data for the NPRI.

5. Working with the private sector to promote environmental sustainability, including

- engaging key players in the finance sector and other relevant stakeholders in identifying the business and financial benefits associated with strong environmental and sustainability performance and in understanding how they can integrate sustainability into their decision-making and operations; and
- providing sustainability tools and best practices to businesses in Canada and the corporate sector to help promote the competitive and innovation benefits of enhanced environmental performance.

Progress

- Progress continued to be made in this area in 2007–2008 but with diminished priority given the heightened focus on the regulatory agenda.
- In February 2008 Environment Canada hosted jointly with New Brunswick's Department of Environment, the fifth in a biennial series of Extended Producer Responsibility (EPR) workshops. EPR programs extend a producer's responsibility for products, both financially and operationally, to the end of life.
- Environment Canada completed a guidance manual on the performance measurement and reporting of EPR programs and new resources, tools and success stories were made available on the Department's website for pollution prevention practitioners.

[19] www.ec.gc.ca/pdb/ghg/inventory_e.cfm

[20] www.ghgreporting.gc.ca/GHGInfo/Pages/page2.aspx?lang=E

Investment

Program Activities	Financial Resources ($ millions)			Human Resources (FTEs)		
	Planned Spending	Total Authorities	Actual Spending	Planned	Actual	Difference
3A – Risks to Canadians, their health and their environment posed by toxic and other harmful substances are reduced	181.0	159.2	133.1	970	826	-144
3B – Canadians adopt sustainable consumption and production approaches	26.5	65.1	58.0	194	388	194
3C – Risks to Canadians, their health and their environment from air pollutants and greenhouse gas emissions are reduced	130.5	127.7	107.9	707	616	-91
Totals	**337.9**	**352.1**	**299.1**	**1871**	**1830**	**-41**

Totals may differ within and between tables due to the rounding of figures.

Program Activity 3A – Risks to Canadians, their health and their environment posed by toxic and other harmful substances are reduced

Program Activity Description[21]

This Program Activity consists of reducing risks to the environment and to human health posed by pollutant releases related to human activities. Under this Program Activity, environmental and human health threats posed by toxic substances and other substances of concern are understood in terms of their fate and effects and prevention, reduction, elimination or other management measures are developed as required. These substances may exert a direct toxic effect on animals, plants or humans or, due to the volume, nature and manner of release, may pose a longer-term risk to the environment and human health.

Performance against Planned Results

Planned Result	**Risks to Canadians, their health and their environment posed by toxic and other harmful substances are assessed**	**Performance Status** (see legend p.5)	●
Related activities and delivery mechanisms	As part of a broad research community, Environment Canada carries out activities to identify and deliver on strategic priorities for risk assessment in support of CEPA, the Chemicals Management Plan, the Security and Prosperity Partnership research agenda, the Pesticide Science Program and other toxic substances-related programs. Environment Canada works with Health Canada in the development of a joint strategy and coordination of activities relating to research of toxics and assessment of risks in support of CMP and SPP. The Department develops and uses scientific data, tools, methods and techniques to support the delivery of science-based risk assessment and management strategies for environmental regulatory decision-making under the Chemicals Management Plan and, to a lesser extent, the Clean Air Agenda. Canada also works collaboratively through forum such as the OECD to advance research, testing methodologies and risk assessments that support domestic and international priorities.		

[21] As stated in Main Estimates 2007-2008

Key indicators	Progress made in 2007–2008
Number of new and existing commercial chemicals assessed	• Under the CMP Challenge, information was requested from industrial users for 5 batches of high-priority substances; over 1709 substance-related submissions were received. • Draft risk assessment reports and risk management scope documents were published for public comment for the first batch of 15 high-priority substances in January 2008. • A rapid ecological screening approach was applied to 1066 lower-risk substances – of these, 754 were proposed to be "not toxic" under the *Canadian Environmental Protection Act , 1999* in June 2007.
Information generated that leads to risk mitigation	• Assessed 20 substances found in batches 1 and 2 of the Chemicals Management Plan; 17 substances and their associated thresholds were recommended for addition to the *Environmental Emergencies Regulations*.
For further information	Chemicals Management Plan : www.chemicalsubstanceschimiques.gc.ca/plan/index_e.html

Planned Result	Risks to Canadians and impacts on the environment posed by toxic and other harmful substances are managed	Performance Status (see legend p.5) ●
Related activities and delivery mechanisms	The Department provides expert advice, consults stakeholders and participates in partnerships with other government departments, industry and civil society to develop and implement risk management and mitigation strategies, instruments and regulatory programs pertaining to the following areas: Federal House[22], Wastewater, Chemicals, Waste Management Sector, Natural Resources Sector, Energy and Transportation Sector, Enforcement, Environmental Emergencies, Contaminated Sites and Marine Pollution Prevention. Canada also recognizes that managing chemical substances must be a global project to be effective. As such, the Department is also a party to a number of chemical conventions and agreements. Participation in these forums helps to protect Canadians from environmental health hazards coming from sources outside of Canada, either from substances and products imported or through the long-range transport of pollutants.	
Key indicators	**Progress made in 2007–2008**	
Development of risk management strategies and instruments (e.g. regulations and performance agreements) for assessed commercial chemicals	• *Notice Requiring the Preparation and Implementation of Pollution Prevention Plans in Respect of Mercury Releases from Mercury Switches in End-of-Life Vehicles Processed by Steel Mills* published in December 2007. • An environmental performance agreement respecting the use of tin stabilizers in the vinyl industry was signed by representatives from Environment Canada, the Vinyl Council of Canada and the Tin Stabilizers Association to prevent the release of tin stabilizers into the environment. • Amendments were published for the Pulp and Paper regulations to streamline and improve their application. • The proposed Storage Tank Regulations were published in the *Canada Gazette* Part I. • Progress was made on numerous risk management proposals including: wastewater effluent, PFOS and PBDE regulations, metal mining effluents, a mining code of practice, PCB regulations and mercury in products. • Permits under various programs, including Disposal at Sea, Hazardous Waste and Hazardous Recyclable Material, were assessed and issued.	

[22] The federal House includes federal lands (e.g., National Parks), federal facilities (e.g., office buildings, labs, penitentiaries, and military bases), First Nation reserves, as well as Nunavut and the Northwest Territories.

Development of risk mitigation measures (e.g. compliance promotion, environmental emergency plans)	• 33 substances were added to the *Environmental Emergency Regulations* due to their adverse effects on the environment or human health. • Under the Federal Contaminated Sites Action Plan, risk reduction activities on 20 priority projects were completed and assessments were carried out on 1400 sites.
For further information	Chemicals Management Plan : www.chemicalsubstanceschimiques.gc.ca/plan/index_e.html Environmental Emergencies: www.ec.gc.ca/CEPARegistry/regulations/detailReg.cfm?intReg=70 Evaluation of the Environmental Emergencies program: www.ec.gc.ca/doc/ae-ve/pue-eep/532_eng.htm Marine Pollution Prevention: www.ec.gc.ca/seadisposal/

Program Activity 3B – Canadians adopt sustainable consumption and production approaches

Program Activity Description[23]

This Program Activity provides a focus for the Department's longer-term efforts to reduce the cost of unsustainable consumption patterns and to shift industry towards more sustainable forms of production. Much of the activity will be centered around large sector-based approaches to enable collaborative and informed decision-making on environmental objectives. Underlying this will be the creation of a clear and predictable environmental protection regime, designed to encourage and enable sustainable production and consumption.

Performance against Planned Results

Planned Result	**Canadians are informed of environmental pollution and are engaged in measures to address it**	**Performance Status** (see legend p.5) ○
Related activities and delivery mechanisms	Activities in this program area include maintaining governance mechanisms (National Advisory Committee, CEPA Registry, statutory reporting) to inform government decision-making and Canadians on matters relating to CEPA 1999, Canada's key environmental protection legislation.	
Key indicators	**Progress made in 2007–2008**	
CEPA Environmental Registry is maintained and up to date	• Efforts were made to improve the comprehensiveness and usability of the CEPA Environmental Registry website. • A usability study was conducted to determine whether the website meets user requirements and expectations and an action plan was developed to address the issues uncovered by the findings and to meet the requirements of the Treasury Board's Common Look and Feel policy, version 2. • Technical improvements related to the CEPA Registry involving common look and feel requirements were deferred pending the development of a plan to address all EC websites.	
CEPA annual report was published	• 2004–2005 *Canadian Environmental Protection Act, 1999* annual report was tabled in February 2008. • CEPA Annual Reports are overdue. This will be rectified by the end of 2008.	
For further information	CEPA Environmental Registry : www.ec.gc.ca/CEPARegistry/Default.cfm	

[23] As stated in Main Estimates 2007-2008

Planned Result	Sector-based and other approaches promote sustainable consumption and production	Performance Status (see legend p.5) ●
Related activities and delivery mechanisms	Activities contributing to this planned result include guidance and training on the selection, design and implementation of regulations, performance agreements, pollution prevention planning notices and other regulatory and non-regulatory measures directed towards the Department's risk management community as well as providing sustainability tools and best practices directly to businesses. The implementation of a quality management system (QMS) that fosters increased departmental efficiencies in the development and sign-off of regulations and other instruments is a key activity. So is the development of a national compliance promotion plan and information management tools for compliance data to support regulatory decision-making and reporting.	
Key indicators	**Progress made in 2007–2008**	
Development and implementation of a quality management system (QMS) to ensure that decision-making under key environmental protection statutes such as CEPA 1999 is as consistent, transparent and predictable as possible	• Overall design for QMS for regulatory programs in Environment Canada was developed and implemented on an ongoing basis within Environment Canada. • The first two QMS modules were developed, approved and implemented (Risk Assessment / Risk Management of Existing Substances under CEPA; "Generic" Regulatory Development and Publication Process at Environment Canada).	
Oversight function and centre of expertise for instrument choice and design is provided to the Department's regulatory community	• Existing centres of expertise and services provided for pollution prevention planning notices and performance agreements were further developed and expanded to encompass other tools under CEPA 1999, including regulations and codes of practice. • New centres of expertise were developed to provide guidance on regulatory requirements for instrument choice, performance measurement and reporting.	
Development and implementation of a national compliance promotion plan to ensure that voluntary compliance to CEPA 1999 and its regulations is encouraged and enabled	• Established a priority setting and planning process to identify priorities for the National Compliance Promotion Plan. Provided compliance promotion material or services to over 7000 regulatees through 110 distinct activities (mailout, workshops, participation in tradeshows etc).	
Development and implementation of the information management tools to provide timely and reliable compliance data for risk management, compliance promotion and enforcement	• Development of a database to track compliance promotion activities and a data warehouse to integrate compliance data throughout the Department.	
Centre of expertise for sustainability policy is established to support the Department's policy development	• Focused centre of expertise developed to enhance policy capacity on the competitive and innovation benefits of improved environmental performance and to help foster corporate sustainability leadership.	

Program Activity 3C – Risks to Canadians, their health, and their environment from air pollutants and greenhouse gas emissions are reduced

Program Activity Description[24]

This Program Activity is critical to protect the health of Canadians from the harmful effects of air pollutants and to protect the environment from the impacts of greenhouse gas emissions. This will be achieved through developing an integrated sector-based approach to regulating air pollutants and controlling greenhouse gas emissions; strengthening international cooperation (particularly with the United States); and promoting

[24] As stated in Main Estimates 2007–2008

science-based approaches to inform the development of new standards and regulations. Environment Canada will demonstrate federal leadership by implementing a broad federal-provincial-territorial approach to achieve national targets to protect the health of Canadians and the environment.

Performance against Planned Results

Planned Result	**Risks from air pollutants and greenhouse gas emissions are managed by a regulatory system for industrial sectors**	**Performance Status** (see legend p.5) ○
Related activities and delivery mechanisms	Activities supporting this planned result focus on the implementation of the industrial regulatory framework for greenhouse gases and the development of the industrial regulatory framework for air pollutants. Working with industry, provinces and key stakeholders has been essential in the achievement of results.	
Key indicators Creation of a framework to guide development of industrial-sector regulations	**Progress made in 2007–2008** • Implementation of the Clean Air Regulatory Agenda CARA policy and regulatory agenda for major industrial emissions sources (i.e. electricity, oil and gas, forest products, mining and processing, chemicals and fertilizer sectors), including regular consultation with provinces and territories, industry and NGOs on policy and regulatory elements. • Publication in December 2007 of a notice that required industry to provide Environment Canada with information about their emissions of air pollutants and greenhouse gases in 2006. • Publication of *Turning the Corner: Regulatory Framework for Industrial Greenhouse Gas Emissions* on March 10, 2008. • Publication of *Canada's Credit for Early Action Program* and *Canada's Offset System for Greenhouse Gases Overview Documents* and *Detailed Emissions and Economic Modelling* on March 10, 2008. • Work underway with provinces and stakeholders to finalize the regulatory framework for industrial air pollutant emissions. • Areas where planned objectives for 2007-2008 were not fully met primarily relate to the finalization of the industrial regulatory framework for air pollutants, as the government decided to extend the period of consultation with provinces and stakeholders.	
For further information	Link to above documents: www.ec.gc.ca/default.asp?lang=En&n=75038EBC-1	

Planned Result	**Risks from air emissions are managed by regulatory systems for transportation and other sectors**	**Performance Status** (see legend p.5) ○
Related activities and delivery mechanisms	Activities supporting this planned result focus on developing regulatory mechanisms to achieve measurable reductions in air pollutants and greenhouse gas emissions that will produce health and environmental benefits, from all key transportation sources and in partnership with all responsible jurisdictions.	
Key indicators Development of regulations to reduce air pollution from vehicles and engines in alignment with United States standards	**Progress made in 2007–2008** • Negotiated a Memorandum of Understanding (MOU) with the Railway Association of Canada (RAC), that is consistent with U.S. EPA air pollution standards and that ensures that the rail industry continues to improve its greenhouse gas emission performance during the period 2006–2010. • Developed an initiative to enhance regulatory cooperation with the U.S. EPA under the Canada-United States Air Quality Agreement. • Progress has been made on the development of final regulations for marine engines and recreational vehicles and the development of proposed amendments for on-board diagnostic systems for on-road heavy-duty engines. • Areas where planned objectives for 2007–2008 were not fully met primarily relate to the delays experienced through international institutions like the United Nations (UN) - International Maritime Organization (IMO).	

Planned Result	**Regulatory monitoring and reporting informs Canadians and decision-makers about air pollutants and greenhouse gas risks and trends**	**Performance Status** (see legend p.5) ●
Related activities and delivery mechanisms	Activities in this program area include the collection and generation of information on releases, disposals and recycling of pollutants, through the National Pollutant Release Inventory (NPRI) and Air Pollutant Emission Inventories; the collection and generation of information on sources and sinks of greenhouse gases (GHGs) through the GHG Emissions Reporting Program (GHGRP) and National GHG Inventory; and provision and enhancement of "One-Window" data collection systems.	
Key indicators	**Progress made in 2007–2008**	
Information-sharing agreements with provinces and territories are developed	• The National Pollutant Release Inventory collected and made publicly available information from over 9000 industrial facilities throughout Canada on their 2006 releases, disposals and recycling of over 350 pollutants released, disposed of and recycled by industrial, institutional and commercial facilities to air, water or land.	
Quality of information reported to and contained in the National Pollutant Release Inventory (NPRI) and the emission inventories for air pollutants and greenhouse gases	• Reporting on 16 additional substances, on mining extraction activities and on portable facilities was added to the 2006 NPRI to provide more comprehensive information on pollution. • The 2007 reporting requirements were published. They include additional requirements for reporting of dioxins and furans, polycyclic aromatic hydrocarbons, total reduced sulphur and particulate from unpaved road dust, as well as removal of the exemption for pits and quarries. • The NPRI and the Air Pollutant Emission Inventories continued an intensive data quality improvement program for air pollutants and other key substances of concern. The approach involves collaborating with other departments such as Statistics Canada and key industrial sectors—to develop better guidance and tools for reporting facilities, to standardize reporting protocols, and to better characterize emissions of priority pollutants from key industrial processes.	
For further information	National Pollutant Release Inventory: www.ec.gc.ca/npri Comprehensive Air Emissions Inventories: www.ec.gc.ca/pdb/cac/cac_home_e.cfm	

Planned Result	**International collaboration on air pollutants and greenhouse gas emissions is consistent with Canadian interests**	**Performance Status** (see legend p.5) ●
Related activities and delivery mechanisms	Contributing activities to this planned result include the reduction of transboundary smog and acid rain through cooperation and negotiation of emission reduction commitments with the United States and Mexico, and fighting ozone depletion by developing Canada's ozone depletion regulations and strengthening the Montreal Protocol. Activities are targeted to the Canadian public, Canadians living in border regions, industry and other stakeholders. Provinces, industry and NGO stakeholders are consulted in advance of meetings under the Montreal Protocol.	

Key indicators	Progress made in 2007–2008
International cooperation, particularly with the United States, is strengthened	• Canada has successfully focused trilateral programs through the Commission for Environmental Cooperation (CEC) under the North American Agreement on Environmental Cooperation (NAAEC) to improve alignment with domestic priorities, including reductions of air pollutants and greenhouse gas emissions. • Canada continues to work with the United States through negotiations for an annex to the Canada-United States Air Quality Agreement aimed at reducing the cross-border flow of particulate matter. • Canada and the United States are moving forward on activities that address this priority result under the Security and Prosperity Partnership of North America (SPP). These activities include a pilot project in Canada to retrofit heavy-duty vehicles. • Canada joined the Asia Pacific Partnership on Clean Development and Climate, a voluntary technology partnership among six countries including the United States, China, India, Japan, South Korea and Australia. The Partnership is designed to accelerate the development and use of cleaner, more efficient technology through public-private partnerships in a way that promotes economic development and reduces poverty. The Partnership brings together major emitting countries representing over 50% of the world's GHG emissions. • Canada hosted the 19th Meeting of the Parties to the Montreal Protocol in Montreal, marking the 20th anniversary of the Protocol. Secured an agreement to accelerate the phase-out of HCFCs under the Montreal Protocol.

Strategic Outcome 4: Sustainable urban development and infrastructure renewal in the Toronto Waterfront area

Strategic context – What is the issue?

For many years, the Toronto waterfront was an industrial area. Industries included heavy manufacturing, oil and coal storage, and waste disposal. Beginning in the 1970s, industries relocated to other locations, with the result that many of the sites would require considerable remediation if they were to be redeveloped in the future. Over the years, the City of Toronto and the federal and provincial governments initiated several projects to improve the area.

In October 2000, following the recommendations of the Toronto Waterfront Revitalization Task Force report, *Our Toronto Waterfront: Gateway to the New Canada*, the Toronto Waterfront Revitalization Initiative was launched as a partnership of the Government of Canada, the Province of Ontario and the City of Toronto. Each of the three orders of government announced a funding commitment of $500 million, for a total of $1.5 billion. The taskforce and the funding supported Toronto's bid for the 2008 Olympic and Paralympic Games, and although while the Games were subsequently awarded to Beijing, the commitments from all three orders of government remained in place.

What are we doing about it? How Environment Canada contributes to this Strategic Outcome

Environment Canada's commitment to this Strategic Outcome is manifest through the management and oversight of two separate but linked contribution programs on the Toronto waterfront: the Toronto Waterfront Revitalization Initiative (TWRI) and the Harbourfront Centre (HC) Funding Program.

Toronto Waterfront Revitalization Initiative

The Toronto Waterfront Revitalization Initiative is an infrastructure and urban renewal initiative designed to contribute to the sustainable urban development of Toronto's waterfront area. The TWRI was launched in October 2000 as a partnership of the Government of Canada, the Province of Ontario and the City of Toronto

The TWRI is an investment in both infrastructure and urban renewal. Its goals include positioning Canada, Ontario and Toronto in the new economy, thereby ensuring Canada's continued success in the global economy and increasing economic growth and development opportunities. Given the intrinsic links between economic, social and environmental health, the objectives also include enhancing the quality of life in Toronto and encouraging sustainable urban development.

The purpose of the TWRI is to revitalize the Toronto waterfront through investments in both traditional city-building infrastructure, such as local transportation and sewers, and more contemporary urban development, including parks, green spaces, tourism-related facilities and the rebirth of underutilized post-industrial areas. It is expected that investments in these areas will result in both social and economic benefits for the Toronto region.

Federal investment in the TWRI is delivered through a contribution program with the Toronto Waterfront Revitalization Corporation, also known as Waterfront Toronto, a not-for-profit corporation established to oversee the revitalization of the waterfront. Waterfront revitalization projects are funded through uni-lateral, bi-lateral, or tri-lateral contribution agreements between one or more of the three governments and the Toronto Waterfront Revitalization Corporation.

Harbourfront Centre Funding Program

Harbourfront Centre (HC) is a not-for-profit, provincially incorporated organization created in 1990 to manage the cultural and educational programming activities. HC is responsible for operating 10 key acres of the Toronto waterfront on behalf of the public, and managing and programming all the public facilities on the site. Its mission is "to nurture the growth of new cultural expression, stimulate Canadian and international interchange and provide a dynamic, accessible environment for the public to experience the marvels of the creative imagination." More specifically, HC provides a vast array of arts and culture programming for all ages, including visual arts, crafts, literature, music, dance and theatre.

In 2006, HC identified a shortfall in base operational funding. The federal government, through the HC Funding Program, entered into a multi-year contribution agreement for $25 million with HC to cover this shortfall and allowed HC to remain operational.

The federal responsibilities for the HC Funding Program relate to the development and management of a contribution agreement specifying the terms and conditions of the operational funding. The funding provides a stable foundation for HC's administration and operations. It facilitates management's ability to leverage funding from other government and corporate sources as well as its ability to pursue other revenue-generating strategies, which ensures ongoing community access to HC's cultural, recreational and educational facilities. This ultimately leads to a financially viable operation that supports the economic, social and cultural development of the Toronto waterfront.

Are we succeeding? Progress against Priorities

The year 2007–2008 was a transitional one for Toronto Waterfront Revitalization Initiative and the Harbourfront Centre as the programs moved from the Treasury Board of Canada Secretariat to Environment Canada. As a result, these programs were not covered in either 2007-2008 Reports on Plans and Priorities. Nevertheless, a number of results were accomplished throughout the year. For example, a number of contribution agreements were signed for projects including the Central Waterfront Public Realm Design, the Spadina Head of Slip Construction, and the Regional Sports Complex – Planning and Design which allowed for the continued implementation of the TWRI. As well, the program was successful in obtain Treasury Board approval for its extension and now sunsets in March 2011.

Investment

Program Activities	Financial Resources ($ millions)			Human Resources (FTEs)		
	Planned Spending	Total Authorities	Actual Spending	Planned	Actual	Difference
4A –Revitalization of the Toronto Waterfront	-	225.4	40.2	-	9	n.a.
4B – Harbourfront Corporation	-	5.0	5.0	-	0	n.a.
Totals	**-**	**230.4**	**45.2**	**-**	**9**	**n.a.**

Totals may differ within and between tables due to the rounding of figures.

There are no planned resources allocated to these Program Activities in the 2007–2008 Report on Plans and Priorities because this work was not under the responsibility of Environment Canada at that time.

The nature of Toronto Waterfront Revitalization Corporation's operations can explain the majority of the variance between total authorities and actual spending, which can be attributed to delays in construction and project implementation resulting from environmental events (i.e. long winter), delays in the approval process by the different levels of government and change in the program authorities responsible for the TWRI.

Program Activity 4A – Revitalization of the Toronto Waterfront

Program Activity Description[25]

Program management and coordination of the federal contribution towards city-building infrastructure, parks, recreation and green spaces, for the renewal and revitalization of Toronto's waterfront.

Performance Against Planned Results

The year 2007–2008 was a transitional one for the Toronto Waterfront Revitalization Initiative (TWRI) as the program moved from the Treasury Board of Canada Secretariat to Environment Canada. Although progress was made in waterfront revitalization, there were no planned results identified in either department's Report on Plans and Priorities due to the program's transition.

An evaluation of the federal government's participation in the TWRI is presently being conducted and led by the Audit and Evaluation Branch at Environment Canada. The evaluation assesses the relevance, success and cost-effectiveness of the TWRI since its inception in 2000–2001. The final report will be approved by Environment Canada in the second half of 2008–2009.

Program Activity 4B – Harbourfront Corporation

Program Activity Description[26]

The Harbourfront Centre (HC) Funding Program provides support to HC to cover its operational costs to facilitate the organization's ability to leverage funding from other governments and pursue other revenue-generating strategies. This will allow HC to provide the general public with continued access to cultural, recreational, and educational programs and activities. The ultimate outcome of the HC Funding Program will be to support the economic, social and cultural development of the Toronto waterfront.

[25] New Program Activity – description as stated in Main Estimates 2008–2009

[26] New Program Activity – description as stated in Main Estimates 2008–2009

Performance Against Planned Results

The year 2007–2008 was a transitional one for the Harbourfront Centre Funding Program as the program moved from the Treasury Board of Canada Secretariat to Environment Canada. Although the program fulfilled its intended purpose, there were no planned results identified in either department's Report on Plans and Priorities. Nevertheless, the program achieved its goal for 2007-08 in that the Harbourfront Centre Funding Program provides funding to the Harbourfront Centre to support its operational costs.

Harbourfront Centre spent 100 percent of the budget of $5M, and remained open, providing community and cultural programming for the general public on the Toronto waterfront.

SECTION III: SUPPLEMENTARY INFORMATION

Departmental Link to the Government of Canada Outcomes

Program Activities	Actual Spending 2007-08 ($ millions)			Alignment to Government of Canada Outcome Area
	Budgetary	Non-budgetary	Total	
Strategic Outcome 1: Canada's natural capital is restored, conserved, and enhanced.				
Biodiversity is conserved and protected	199.9	-	**199.9**	
Water is clean, safe and secure	102.0	-	**102.0**	Clean and Healthy Environment
Canadians adopt approaches that ensure the sustainable use and management of natural capital and working landscapes	46.3	-	**46.3**	
Strategic Outcome 2: Weather and environmental predictions and services reduce risks and contribute to the well-being of Canadians.				
Improved knowledge and information on weather and environmental conditions influences decision-making	146.8	-	**146.8**	Clean and Healthy Environment
Canadians are informed of, and respond appropriately to, current and predicted environmental conditions	157.8	-	**157.8**	
Strategic Outcome 3: Canadians and their environment are protected from the effects of pollution and waste.				
Risks to Canadians, their health and their environment posed by toxic and other harmful substances are reduced	133.1	-	**133.1**	
Canadians adopt sustainable consumption and production approaches	58.0	-	**58.0**	Clean and Healthy Environment
Risks to Canadians, their health, and their environment from air pollutants and greenhouse gas emissions are reduced	107.9	-	**107.9**	
Strategic Outcome 4: Sustainable urban development and infrastructure renewal in the Toronto Waterfront area				
Revitalization of the Toronto Waterfront	40.2	-	**40.2**	Strong Economic Growth
Harbourfront Corporation	5.0	-	**5.0**	A vibrant Canadian Culture and Heritage
TOTAL	**997.0**		**997.0**	

Table 1 – Comparison of Planned to Actual Spending (including Full-time Equivalents)

This table offers a comparison of the Main Estimates, planned spending, total authorities, and actual spending for the most recently completed fiscal year, as well as historical figures for actual spending

($ millions)	2005–2006 Actual[1]	2006–2007 Actual[1]	2007–2008 Main Estimates	2007–2008 Planned Spending	2007–2008 Total Authorities	2007–2008 Actual Spending
Biodiversity is conserved and protected	130.5	143.5	110.8	126.0	200.2	199.9
Water is clean, safe and secure	60.1	95.7	79.9	80.0	101.4	102.0
Canadians adopt approaches that ensure the sustainable use and management of natural capital and working landscapes	79.4	59.6	30.8	30.8	52.6	46.3
Improved knowledge and information on weather and environmental conditions influences decision-making	130.8	138.9	126.1	126.2	150.2	146.8
Canadians are informed of, and respond appropriately to, current and predicted environmental conditions	176.1	146.9	156.7	156.8	160.5	157.8
Risks to Canadians, their health and their environment posed by toxic and other harmful substances are reduced	344.2	229.8	180.9	181.0	159.2	133.1
Canadians adopt sustainable consumption and production approaches	44.1	29.7	26.5	26.5	65.1	58.0
Risks to Canadians, their health, and their environment from air pollutants and greenhouse gas emissions are reduced	76.5	24.4	130.4	130.5	127.7	107.9
Revitalization of the Toronto Waterfront	0.0	0.0	0.0	0.0	225.4	40.2
Harbourfront Corporation	0.0	0.0	0.0	0.0	5.0	5.0
Total	**1,041.5**	**868.4**	**842.0**	**857.8**	**1,247.5**	**997.0**
Less: Non-respendable revenue	(10.7)	(11.8)	N/A	(11.1)	N/A	(11.7)
Plus: Cost of services received without charge[2]	75.5	81.3	N/A	N/A	N/A	N/A
Total Departmental Spending	**1,106.3**	**938.0**	**842.0**	**846.7**	**1,247.5**	**985.3**
Full-time Equivalents	**6,463**	**6,646**	**N/A**	**6,454**	**N/A**	**6,503**

Totals may differ between and within tables due to rounding of figures.

Note: Excludes respendable revenues

(1) Due to the change in reporting structure, the amounts by program activity were calculated based on the revised Program Activity Architecture. Refer to Environment Canada's previous departmental performance reports (DPRs) for detailed financial information.

(2) Services received without charge include accommodation provided by Public Works and Government Services Canada; the employer's share of employees' insurance premiums; and expenditures paid by the Treasury Board Secretariat (excluding revolving funds); worker's compensation coverage provided by Human Resources and Social Development Canada; and services received from the Department of Justice Canada; these data are no longer reported commencing 2007–2008.

Changes between 2006–2007 Actual Spending and 2007–2008 Actual Spending

In January 2007 responsibility for the Toronto Waterfront Revitalization Initiative was transferred to Environment Canada.

Table 2 – Voted and Statutory Items

This table explains the way Parliament votes resources to the Department.

Vote or Statutory Item	Truncated Vote or Statutory Wording	2007–2008 ($ millions)			
		Main Estimates	Planned Spending	Total Authorities	Actual Spending
1	Operating expenditures	662.6	678.6	759.6	**700.5**
5	Capital expenditures	40.0	40.0	40.6	**35.7**
10	Grants and contributions	59.7	59.7	293.2	**106.9**
(S)	Minister of the Environment —Salary and motor car allowance	0.1	0.1	0.1	**0.1**
(S)	Contributions to employee benefit plans	79.5	79.5	81.1	**81.1**
(S)	Spending of proceeds from the disposal of surplus Crown assets	–	–	1.1	**1.0**
(S)	Nature Conservancy of Canada	–	–	70.2	**70.2**
(S)	Grant to the Canada Foundation for Sustainable Development Technology	–	–	1.6	**1.6**
	Total	**842.0**	**857.8**	**1,247.5**	**997.0**

Totals may differ between and within tables due to rounding of figures.

Note: Excludes respendable revenues

Table 3– Sources of Respendable and Non-Respendable Revenues

For supplementary information on the Department's sources of respendable and non-respendable revenue, please visit: www.tbs-sct.gc.ca/dpr-rmr/2007-2008/index-eng.asp.

Table 4-A – User Fees

For supplementary information on the Department's user fees, please visit: www.tbs-sct.gc.ca/dpr-rmr/2007-2008/index-eng.asp.

Table 4-B – Service Standards for External Fees

For supplementary information on the Department's service standards for external fees, please visit: www.tbs-sct.gc.ca/dpr-rmr/2007-2008/index-eng.asp.

Table 5 – Details on Project Spending

In 2007–2008, Environment Canada managed the following projects that exceeded their delegated project approval level:

- Weather station construction Eureka, Nunavut – Generator Replacement Phase
- Hydrometric Program
- Canadian Meteorological Centre – Facility Extension
- Supercomputer Facility Upgrade to Electrical and Cooling Capacity
- Modernization of the Climate Observing Program
- UPS Replacement – Dorval Facility

Supplementary information on the project spending can be found at: www.tbs-sct.gc.ca/dpr-rmr/2007-2008/index-eng.asp.

Table 6 – Details on Transfer Payment Programs

In 2007–2008, Environment Canada managed the following transfer payment programs with total spending of or exceeding $5 million during the reporting year:

- Contributions to support environmental and sustainable development initiatives
- Contributions to Habitat Stewardship Program for Species at Risk
- Contributions to the EcoAction Community Funding Initiative
- Contributions to support Canada's international commitments
- Contribution to the Harbourfront Centre
- Toronto Waterfront Revitalization Initiative

Supplementary information on these transfer payment programs can be found at: www.tbs-sct.gc.ca/dpr-rmr/2007-2008/index-eng.asp.

Table 7 – Foundations (Conditional Grants)

Environment Canada has provided conditional grants to the independent foundations identified below:

- Canadian Foundation for Climate and Atmospheric Science (CFCAS)
- Sustainable Development Technology Canada (SDTC)
- Federation of Canadian Municipalities (FCM) Green Municipal Funds (GMF)
- Clayoquot Biosphere Trust
- Nature Conservancy of Canada (NCC)

Supplementary information on conditional grants can be found at: www.tbs-sct.gc.ca/dpr-rmr/2007-2008/index-eng.asp.

Table 8 – Horizontal Initiatives

In 2007–2008, Environment Canada contributed to the following horizontal initiatives:

- Canadian Group on Earth Observations (CGEO)
- Clean Air Agenda
- Great Lakes Basin Ecosystem Initiative
- Implementation of the *Species at Risk Act*
- Federal Contaminated Sites Action Plan

Supplementary information on horizontal initiatives can be found at: www.tbs-sct.gc.ca/dpr-rmr/2007-2008/index-eng.asp.

Table 9 – Sustainable Development Strategy

For supplementary information on the Department's sustainable development strategy, please visit: www.tbs-sct.gc.ca/dpr-rmr/2007-2008/index-eng.asp.

Table 10 – Response to Parliamentary Committees and External Audits

For supplementary information on the Department's response to Parliamentary committees and external audits, please visit: www.tbs-sct.gc.ca/dpr-rmr/2007-2008/index-eng.asp.

Table 11 – Internal Audits and Evaluations

For supplementary information on the Department's internal audits and evaluations, please visit: www.tbs-sct.gc.ca/dpr-rmr/2007-2008/index-eng.asp.

Table 12 – Travel Policies

Environment Canada follows the Treasury Board of Canada Secretariat Special Travel Authorities.

Environment Canada follows the Treasury Board of Canada Secretariat Travel Directive, Rates and Allowances.

Financial Statements 2007–2008 *(unaudited)*

Statement of Management Responsibility

Responsibility for the integrity and objectivity of the accompanying financial statements for the year ended March 31, 2008 and all information contained in these statements rests with departmental management. These financial statements have been prepared by management in accordance with Treasury Board accounting policies which are consistent with Canadian generally accepted accounting principles for the public sector.

Management is responsible for the integrity and objectivity of the information in these financial statements. Some of the information in the financial statements is based on management's best estimates and judgment and gives due consideration to materiality. To fulfill its accounting and reporting responsibilities, management maintains a set of accounts that provides a centralized record of the department's financial transactions. Financial information submitted to the *Public Accounts of Canada* and included in the department's *Departmental Performance Report* is consistent with these financial statements.

Management maintains a system of financial management and internal control designed to provide reasonable assurance that financial information is reliable, that assets are safeguarded and that transactions are in accordance with the *Financial Administration Act*, are executed in accordance with prescribed regulations, within Parliamentary authorities, and are properly recorded to maintain accountability of Government funds. Management also seeks to ensure the objectivity and integrity of data in its financial statements by careful selection, training and development of qualified staff, by organizational arrangements that provide appropriate divisions of responsibility, and by communication programs aimed at ensuring that regulations, policies, standards and managerial authorities are understood throughout the department.

The Audit Committee ensures that the Deputy has independent objective advice and assurance on the adequacy of EC's internal control and accountability processes. It ensures that there are effective arrangements in place to monitor and follow-up on management action plans responding to recommendations from internal audits, the OAG, or other sources. It reviews EC financial statements and the corporate risk profile. It also reviews the arrangements established by management to promote public service values and to ensure compliance with laws, regulations, policies, and standards of ethical conduct.

The financial statements of the department have not been audited.

Ian Shugart, Deputy Minister

Basia Ruta, ADM, Finance & Corporate,
Chief Financial Officer

Gatineau, Canada

Environment Canada

Statement of Operations *(Unaudited)*
For the year Ended March 31

Expenses (Note 4 and Note 14)	2008	2007
Biodiversity is conserved and protected	208,465,130	191,808,469
Canadians are informed of, and respond appropriately to, current and predicted environmental conditions	194,947,112	224,456,742
Improved knowledge and information on weather and environmental conditions influences decision-making	162,561,296	200,889,758
Risks to Canadians, their health and their environment posed by toxic and other harmful substances are reduced	123,565,764	322,239,498
Water is clean, safe and secure	107,961,202	114,538,605
Risks to Canadians, their health and their environment from air pollutants and greenhouse gas emissions are reduced	96,430,790	-
Canadians adopt sustainable consumption and production approaches	60,223,410	38,909,456
Canadians adopt approaches that ensure the sustainable use and management of natural capital and working landscape	47,167,963	89,319,219
Revitalization of the Toronto Waterfront	43,405,295	-
Net emissions of greenhouse gases are reduced	-	37,461,802
Canadians understand the impacts of climate change and adapt to its effects	-	5,368,089
Harbourfront Corporation	5,393,755	-
Total Expenses	**1,050,121,717**	**1,224,991,638**
Revenues (Note 5 and Note 14)		
Biodiversity is conserved and protected	4,765,936	5,113,568
Canadians are informed of, and respond appropriately to, current and predicted environmental conditions	45,884,046	45,220,514
Risks to Canadians, their health and their environment posed by toxic and other harmful substances are reduced	3,501,049	5,678,825
Improved knowledge and information on weather and environmental conditions influences decision-making	18,762,725	17,804,665
Water is clean, safe and secure	5,520,001	4,236,793
Risks to Canadians, their health and their environment from air pollutants and greenhouse gas emissions are reduced	545,195	-
Canadians adopt sustainable consumption and production approaches	26,858	57,907
Canadians adopt approaches that ensure the sustainable use and management of natural capital and working landscape	1,065,591	255,175
Revitalization of the Toronto Waterfront	-	-
Net emissions of greenhouse gases are reduced	-	29,330
Canadians understand the impacts of climate change and adapt to its effects	-	133,553
Harbourfront Corporation	-	-
Total Revenues	**80,071,401**	**78,530,330**
Net Cost of Operations	**970,050,316**	**1,146,461,308**

The accompanying notes form an integral part of these financial statements

Environment Canada

Statement of Financial Position *(Unaudited)*
At March 31

	2008	2007
ASSETS		
Financial assets		
Accounts receivable and advances (Note 6)	7,304,866	14,979,585
Total financial assets	**7,304,866**	**14,979,585**
Non-financial assets		
Prepaid expenses	1,668,952	1,556,068
Inventory	5,158,212	2,640,884
Tangible capital assets (Note 7)	341,119,363	338,322,332
Total non-financial assets	**347,946,527**	**342,519,284**
TOTAL	**355,251,393**	**357,498,869**
LIABILITIES		
Accounts payable and accrued liabilities	296,605,020	367,528,561
Vacation pay & compensatory leave	28,672,643	31,096,975
Deferred revenue (Note 8)	258,071	57,681
Lease obligation for tangible capital assets (Note 9)	14,933,899	15,368,902
Environmental liabilities (Note 11)	55,520,174	63,266,228
Employee severance benefits (Note 10)	105,183,622	110,801,226
Other liabilities	6,719,346	7,420,106
	507,892,775	**595,539,679**
Equity of Canada	(152,641,382)	(238,040,810)
TOTAL	**355,251,393**	**357,498,869**

Contingent Liabilities (Note 11)
Contractual Obligations (Note 12)

The accompanying notes form an integral part of these financial statements

Environment Canada

Statement of Equity of Canada *(Unaudited)*
For the Year Ended March 31

	2008	2007
Equity of Canada, beginning of year	(238,040,810)	(27,465,783)
Net cost of operations	(970,050,316)	(1,146,461,308)
Current year appropriations used (Note 3)	997,031,436	868,438,867
Revenue not available for spending	(13,519,511)	(13,644,670)
Change in net position in the Consolidated Revenue Fund (Note 3)	(3,465,719)	2,514,097
Refund of previous year's expenditures	(1,257,550)	(2,694,559)
Services provided without charge by other government departments (Note 13)	76,661,088	81,272,546
Equity of Canada, end of year	**(152,641,382)**	**(238,040,810)**

The accompanying notes form an integral part of these financial statements

Environment Canada

Statement of Cash Flow *(Unaudited)*

For the Year Ended March 31

	2008	2007
Operating activities		
Net cost of operations	970,050,316	1,146,461,308
Non-cash items:		
Services provided without charge	(76,661,088)	(81,272,546)
Amortization of tangible capital assets	(36,879,108)	(34,997,054)
Loss on disposal and write-down of tangible capital assets	(888,513)	(2,685,064)
Found assets credited to Revenue	411,033	671,414
Other non-cash items	651,271	46,699
Variations in Statement of Financial Position:		
Increase (decrease) in financial assets	(7,674,719)	7,418,262
Increase (decrease) in prepaid	112,886	(285,210)
Increase (decrease) in inventory	2,517,328	(845,966)
Decrease (increase) in liabilities	87,646,904	(219,670,413)
Cash used by operating activities	**939,286,310**	**814,841,430**
Capital investment activities		
Acquisitions of tangible capital assets	38,449,476	37,871,420
Salary costs transferred to Work in Progress accounts	1,681,598	2,348,633
Acquisition of tangible capital assets with Specified Purpose Accounts	79,965	73,909
Proceeds from disposal of tangible capital assets	(708,693)	(521,658)
Cash used by capital investment activities	**39,502,346**	**39,772,304**
Financing activities		
Net cash provided by Government of Canada	**(978,788,656)**	**(854,613,734)**

The accompanying notes form an integral part of these financial statements

Environment Canada

Notes to the Financial Statements *(Unaudited)*

1. Authority and Objectives

Environment Canada (EC) was established under legislation by the *Department of the Environment Act*. Under this *Act*, the powers, duties and functions of the Minister of the Environment extend to and include matters relating to:

- The preservation and enhancement of the quality of the natural environment (including water, air and soil quality);
- Renewable resources, including migratory birds and other non-domestic flora and fauna;
- Water;
- Meteorology;
- Enforcement of any rules or regulations made by the International Joint Commission relating to boundary waters; and
- Coordination of the policies and programs of the Government of Canada respecting the preservation and enhancement of the quality of the natural environment.

Environment Canada delivers its mandate through the following 10 programs:

- Biodiversity is conserved and protected
- Canadians are informed of, and respond appropriately to, current and predicted environmental conditions
- Improved knowledge and information on weather and environmental conditions influences decision-making
- Risks to Canadian, their health and their environment posed by toxic and other harmful substances are reduced
- Water is clean, safe and secure
- Risks to Canadians, their health and their environment from air pollutants and greenhouse gas emissions are reduced
- Canadians adopt sustainable consumption and production approaches
- Canadians adopt approaches that ensure the sustainable use and management of natural capital and working landscape
- Revitalization of the Toronto Waterfront
- Harbourfront Corporation

In addition, Environment Canada has authority under a number of pieces of legislation which affect how the department operates. The most significant *Acts* are as follows:

- *Antarctic Environmental Protection Act*
- *Canada Water Act*
- *Canada Wildlife Act*
- *Canadian Environment Week Act*
- *Canadian Environmental Assessment Act*
- *Canadian Environmental Protection Act, 1999*

- *Department of the Environment Act*
- *Fisheries Act* (Sections 36-42)
- *International River Improvements Act*
- *Migratory Birds Convention Act, 1994*
- *National Wildlife Week Act*
- *Species at Risk Act*
- *Weather Modification Information Act*
- *Wild Animal and Plant Protection and Regulation of International and Interprovincial Trade Act*

2. Summary of Significant Accounting Policies

The financial statements have been prepared in accordance with Treasury Board accounting policies which are consistent with Canadian generally accepted accounting principles for the public sector.

Significant accounting policies are as follows:

(a) Parliamentary appropriations – the Department is financed by the Government of Canada through Parliamentary appropriations. Appropriations provided to the department do not parallel financial reporting according to generally accepted accounting principles since appropriations are primarily based on cash flow requirements. Consequently, items recognized in the statement of operations and the Statement of financial position are not necessarily the same as those provided through appropriations from Parliament. Note 3 provides a high-level reconciliation between the bases of reporting.

(b) Net Cash Provided by Government – The department operates within the Consolidated Revenue Fund (CRF). The CRF is administered by the Receiver General for Canada. All cash received by the department is deposited to the CRF and all cash disbursements made by the department are paid from the CRF. Net cash provided by Government is the difference between all cash receipts and all cash disbursements including transactions between departments of the federal government.

(c) Revenues – Revenues are accounted for in the period in which the underlying transaction or event occurred that gave rise to the revenues. Revenues that have been received but not yet earned are presented as deferred revenues (note 8).

(d) Change in net position in the Consolidated Revenue Fund is the difference between the net cash provided by Government and appropriations used in a year, excluding the amount of non respendable revenue recorded by the department. It results from timing difference between when a transaction affects appropriations and when it is processed through the CRF.

(e) Expenses – Expenses are recorded on the accrual basis:

- Grants are recognized in the year in which payment is due or in which the recipient has met the eligibility criteria. In the case of grants which do not form part of an existing program, the expense is recognized when the Government announces a decision to make a non-recurring transfer, provided the enabling legislation or authorization for payment receives parliamentary approval prior to the completion of the financial statements.

- Contributions are recognized in the year in which the recipient has met the eligibility criteria or fulfilled the terms of a contractual transfer agreement.

- Vacation pay and compensatory leave are expensed as the benefits accrue to employees under their respective terms of employment.

- Services provided without charge by other government departments for accommodation, the employer's contribution to the health and dental insurance plans and legal services are recorded as operating expenses at their estimated cost. The providers of these services determine the estimated costs to be recorded by the departments.

(f) Employee future benefits

(i) Pension benefits: Eligible employees participate in the Public Service Pension Plan, a multiemployer administered by the Government of Canada. The department's contributions to the Plan are charged to expenses in the year incurred and represent the total departmental obligation to the Plan. Current legislation does not require the department to make contributions for any actuarial deficiencies of the Plan.

(ii) Severance benefits: Employees are entitled to severance benefits under labour contracts or conditions of employment. These benefits are accrued as employees render the services necessary to earn them. The obligation relating to the benefits earned by employees is calculated using information derived from the results of the actuarially determined liability for employee severance benefits for the Government as a whole.

(g) Accounts and loans receivables are stated at amounts expected to be ultimately realized; a provision is made for receivables where recovery is considered uncertain.

(h) Contingent liabilities – Contingent liabilities are potential liabilities which may become actual liabilities when one or more future events occur or fail to occur. To the extent that the future event is likely to occur or fail to occur, and a reasonable estimate of the loss can be made, an estimated liability is accrued and an expense recorded. If the likelihood is not determinable or an amount cannot be reasonably estimated, the contingency is disclosed in the notes to the financial statements.

(i) Environmental liabilities – Environmental liabilities reflect the estimated costs related to the management and remediation of environmentally contaminated sites. Based on management's best estimates, a liability is accrued and an expense recorded when the contamination occurs or when the department becomes aware of the contamination and is obligated, or is likely to be obligated to incur such costs. If the likelihood of the department's obligation to incur these costs is either not determinable or unlikely, or if an amount cannot be reasonably estimated, the costs are disclosed as contingent liabilities in the notes to the financial statements.

(j) Inventory – Inventory consist of parts, material and supplies held for future program delivery and not intended for re-sale. They are valued at cost. If they no longer have service potential, they are valued at the lower of cost or net realizable value.

(k) Tangible capital assets – All tangible capital assets and leasehold improvements having an initial cost of $10,000 or more are recorded at their acquisition cost. The department does not capitalize intangibles, works of art and historical treasures that have cultural, aesthetic or historical value, assets located on Indian Reserves and museum collections.

Capital assets are amortized on a straight-line basis over the estimated useful life of the asset as follows:

Asset Class	Amortization (Years)
Buildings	25 to 40
Works and Infrastructure	20 to 40
Machinery and Equipment	1 to 15
Vehicles	3 to 25
Leasehold Improvements	Term of Lease
Assets under construction	Once in service, in accordance with asset type
Leased tangible capital assets	In accordance with asset type

(l) Measurement uncertainty – The preparation of these financial statements in accordance with Treasury Board accounting policies which are consistent with Canadian generally accepted accounting principles for the public sector requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses reported in the financial statements. At the time of preparation of these statements, management believes the estimates and assumptions to be reasonable. The most significant items where estimates are used are contingent liabilities, environmental liabilities, the liability for employee severance benefits and the useful life of tangible capital assets. Actual results could differ from those estimated. Management's estimates are reviewed periodically and, as adjustments become necessary, they are recorded in the financial statements in the year they become known.

3. Parliamentary Appropriations

The Department receives most of its funding through annual Parliamentary appropriations. Items recognized in the statement of operations and the statement of financial position in one year may be funded through Parliamentary appropriations in prior, current or future years. Accordingly, the Department has different net results of operations for the year on a government funding basis than on an accrual accounting basis. The differences between net results of operations and appropriations are reconciled in the following tables.

(a) Reconciliation of net cost of operations to current year appropriations used:

	2008	2007
Net cost of operations	**970,050,316**	**1,146,461,308**
Adjustments for items affecting net cost of operations but not affecting appropriations:		
Add (Less):		
Amortization of tangible capital assets	(36,879,108)	(34,997,054)
Project deposits – Environment	(2,976,965)	(3,124,968)
Prepaid expenses previously charged to appropriation	112,886	(287,132)
Vacation pay and compensatory leave	2,424,332	686,515
Other	18,429,171	(518,591)
Environmental Damage Fund	(346,022)	(320,458)
Bad debt expense	(701)	(119,038)
Foreign exchange losses	(20,064)	(26,946)
Expenses not being charged to Appropriations at the same time	70,175,000	(225,603,000)
Expenses for claims pending litigation	25,000	2,175,000
Adjustments for prior years PAYE	1,070,624	4,930,551
Refund of previous year's expenditures	1,257,550	2,694,558
Revenues not available for spending	13,519,511	13,644,670
Inventory	2,517,328	(846,965)
Expenses related to Environmental Liabilities	7,746,054	20,571,572
Services received without charge	(76,661,088)	(81,272,546)
Employee Severance Benefits	5,617,604	(10,078,347)
Justice Canada fees	-	(4,417,195)
	976,061,428	**830,155,934**
Adjustments for items not affecting net cost of operations but affecting appropriations		
Add (Less): Acquisition of tangible capital assets	20,535,005	37,871,420
Capital lease payments	435,003	411,513
Current year appropriations used	**997,031,436**	**868,438,867**

(b) Appropriations provided and used

	Appropriations Provided	
	2008	**2007**
Vote 1 - Operating expenditures	759,648,938	716,182,561
Vote 5 - Capital expenditures	40,612,001	40,000,001
Vote 10 - Grants & Contributions	293,178,335	49,719,502
Statutory amounts	154,070,294	82,406,977
	1,247,509,568	888,309,041
Less:		
Appropriations available for future years	(114,505)	(284,065)
Lapsed appropriations	(250,363,627)	(19,586,109)
	(250,478,132)	(19,870,174)
Total appropriations used	**997,031,436**	**868,438,867**

(c) Reconciliation of net cash provided by Government to current year appropriations used

	2008	**2007**
Net Cash provided by Government	978,788,656	854,613,734
Revenues not available for spending:	13,519,511	13,644,671
Refund of previous year's expenditures	1,257,550	2,694,559
	993,565,717	870,952,964
Change in net position in the Consolidated Revenue Fund		
Variation in accounts receivable and advances	7,674,203	(7,418,262)
Variation in accounts payable and accrued liabilities	(1,223,912)	8,486,738
Variation in deferred revenue	200,390	13,070
Other adjustments	(3,184,962)	(3,595,643)
Change in net position in the Consolidated Revenue Fund	3,465,719	(2,514,097)
Current year appropriations used	**997,031,436**	**868,438,867**

4. Expenses

	2008	2007
Operations and administration		
Salaries and employee benefits	590,207,364	615,278,953
Professional and special services	78,357,723	82,703,435
Accommodation	44,690,853	42,681,107
Amortization	36,879,108	34,997,054
Other contracted services	34,593,892	32,361,075
Travel	34,114,020	41,889,706
Machinery & equipment	32,304,470	25,345,694
Rentals	28,494,317	26,167,708
Materials and supplies	21,936,563	25,266,374
Telecommunications	15,282,419	16,534,497
Equipment repair and maintenance	13,422,097	14,909,048
Information services – communications	8,983,029	7,052,768
Postage	4,017,779	3,133,364
Other	1,870,448	300,758
Loss on disposal of capital assets	622,322	488,966
Loss on write-down	543,152	2,378,257
Environmental liabilities	(7,746,054)	(20,571,572)
Sub-total Operations and administration	**938,573,502**	**950,917,192**
Transfer payments		
Non-profit organizations	87,800,290	261,718,475
Other countries and international organizations	13,114,833	6,539,067
Other levels of governments within Canada	7,301,558	2,020,186
Other to individuals	3,268,443	3,359,694
Industry	63,091	437,024
Sub-total transfer payments	**111,548,215**	**274,074,446**
Total Expenses	**1,050,121,717**	**1,224,991,638**

Notes to the Financial Statements *(Unaudited)*

5. Revenues

	2008	2007
Sales of goods and services		
Sales of goods and information products	43,560,772	43,684,311
Services of a non-regulatory nature	17,748,738	18,743,797
Services of a regulatory nature	5,140,792	5,849,109
Lease and use of public property	4,615,241	1,251,878
Rights and privileges	616,452	659,362
Other	8,698	16,497
Sub-total sales	**71,690,693**	**70,204,954**
Other	3,811,010	3,111,523
Joint projects and cost sharing agreements	2,987,572	3,142,747
Environmental damages fund	649,862	903,314
Found assets credited to revenue	411,033	671,414
Gain on disposal of assets	371,202	370,104
Gain on foreign exchange	113,697	64,926
Interests and penalties	33,232	44,581
Fines	3,100	16,767
Sub-total	**8,380,708**	**8,325,376**
Total revenues	**80,071,401**	**78,530,330**

6. Accounts Receivable and advances

	2008	2007
External Parties	3,336,686	4,075,919
Other Government Departments	4,221,244	11,180,556
	7,557,930	15,256,475
Less: allowance for doubtful accounts on external receivables	(443,952)	(443,435)
Net accounts receivables	7,113,978	14,813,040
Advances to employees	190,888	166,545
Total	**7,304,866**	**14,979,585**

7. Tangible Capital Assets

Cost					Accumulated amortization					
Capital asset class	Opening balance	Acquisitions	Disposals and write-offs	Closing balance	Opening balance	Amortization	Disposals and write-offs	Closing balance	2008 Net book value	2007 Net book value
Land	25,244,421	-	-	25,244,421	-	-	-	-	25,244,421	25,244,421
Buildings	149,805,204	639,952	121,360	150,323,796	78,340,440	4,932,823	18,095	83,255,168	67,068,626	71,464,763
Works and infrastructure	3,720,359	124,587	-	3,844,946	1,820,587	144,856	-	1,965,443	1,879,503	1,899,772
Machinery and equipment	417,751,640	20,148,408	7,265,731	430,634,317	291,794,958	26,607,945	6,286,734	312,116,169	118,518,148	125,956,682
Vehicles	36,388,494	3,694,115	2,693,037	37,389,572	23,709,112	3,048,238	1,770,956	24,986,394	12,403,178	12,679,381
Leasehold improvements	34,991,977	-	-	34,991,977	19,012,201	1,415,858	-	20,428,059	14,563,918	15,979,776
Assets under construction	70,538,018	17,603,858	543,152	87,598,724	-	-	-	-	87,598,724	70,538,018
Capital lease for office and laboratory space	18,198,560	14,125	-	18,212,685	3,639,041	729,388	(1,413)	4,369,842	13,842,843	14,559,519
Total	**756,638,673**	**42,225,045**	**10,623,280**	**788,240,438**	**418,316,339**	**36,879,108**	**8,074,372**	**447,121,075**	**341,119,363**	**338,322,332**

Amortization expense for the year ended March 31, 2008 is $36,879,108 (2007: $34,997,054).

8. Deferred Revenue

Deferred revenue represents the balance at year-end of unearned revenue stemming from donations, which are restricted to fund studies related to endangered species. Revenue is recognized each year in the amount of the total cost incurred. Details of the transactions related to this account are as follows:

	2008	2007
Opening balance	57,681	44,611
Donations received	200,390	13,070
Revenue recognized	-	-
Closing balance	**258,071**	**57,681**

9. Lease obligation for tangible capital assets

On October 13, 2000, the department entered into an agreement to rent office and laboratory space from Carleton University, for the National Wildlife Research Centre (NWRC), under capital lease. Current cost is of $18,198,560 and accumulated amortization of $4,367,016 as at March 31, 2008 ($18,198,560 and $3,639,041 respectively as at March 31, 2007)

The obligation for the upcoming years includes the following:

Maturing year	2008	2007
2009	1,300,000	1,300,000
2010	1,300,000	1,300,000
2011	1,300,000	1,300,000
2012	1,300,000	1,300,000
2013 and thereafter	19,500,000	20,800,000
Total future minimum lease payments	24,700,000	26,000,000
Less: imputed interest (5.63%)	9,766,101	10,631,098
Balance of obligation under leased tangible capital assets	**14,933,899**	**15,368,902**

10. Employee Benefits

(a) Pension benefits: The department's employees participate in the Public Service Pension Plan, which is sponsored and administered by the Government of Canada. Pension benefits accrue up to a maximum period of 35 years at a rate of 2 percent per year of pensionable service, times the average of the best five consecutive years of earnings. The benefits are integrated with Canada/Québec Pension Plans benefits and they are indexed to inflation.

Both the employees and the department contribute to the cost of the Plan. The 2007-2008 expense amounts to $59,113,373 ($59,920,597 in 2006-2007) which represents approximately 2.1 times the contributions by employees (2.2 times in 2006-2007).

The department's responsibility with regard to the Plan is limited to its contributions. Actuarial surpluses or deficiencies are recognized in the financial statements of the Government of Canada, as the Plan's sponsor.

(b) Severance benefits: The department provides severance benefits to its employees based on eligibility, years of service and final salary. These severance benefits are not pre-funded. Benefits will be paid from future appropriations. Information about the severance benefits, measured as at March 31, is as follows:

	2008	2007
Accrued benefit obligation, beginning of year	110,801,226	100,722,879
Expense for the year	2,738,019	17,543,411
Benefits paid during the year	(8,355,623)	(7,465,064)
Accrued benefit obligation, end of year	**105,183,622**	**110,801,226**

11. Contingent liabilities

(a) Contaminated sites

Liabilities are accrued to record the estimated costs related to the management and remediation of contaminated sites where Environment Canada is obligated or likely to be obligated to incur such costs. Environment Canada has identified 15 sites (54 in 2007) where such action is possible and for which a liability of $55,520,174 ($63,266,228 in 2007) has been recorded. Environment Canada has estimated additional clean-up costs of $45,486,719 ($96,266,228 in 2007) that are not accrued, as these are not considered likely to be incurred at this time. Environment Canada's ongoing efforts to assess contaminated sites may result in additional environmental liabilities related to newly identified sites, or changes in the assessments or intended use of existing sites. These liabilities will be accrued by the department in the year in which they become known.

(b) Claims and litigation

Environment Canada records an allowance for claims and pending or threatened litigation where cases are expected to be lost and where the cost can be reasonably estimated. To the extent that the future event is likely to occur or fail to occur, and a reasonable estimate of the loss can be made, an estimated liability is accrued and an expense recorded in the financial statements. As at March 31, 2008, Environment Canada had no contingent liability identified as likely for claims and for pending and threatened litigation.

12. Contractual Obligations

The nature of the department's activities can result in some large multi-year contracts and obligations whereby the department will be obligated to make future payments when the services/goods are received. Significant contractual obligations that can be reasonably estimated are summarized as follows:

	2009	2010	2011	2012	2013	Thereafter	Total
Operating leases	7,900,000	7,900,000	7,900,000	7,900,000	7,900,000	229,000,000	268,500,000
Super Computer	7,930,925	3,341,652	-	-	-	-	11,272,577
Total	**15,830,925**	**11,241,652**	**7,900,000**	**7,900,000**	**7,900,000**	**229,000,000**	**279,772,577**

13. Related party transactions

The department is related as a result of common ownership to all Government of Canada departments, agencies, and Crown corporations. The Government has structured some of its administrative activities for efficiency and cost-effectiveness purposes so that one department performs these on behalf of all without charge. The costs of these services, which include payroll and cheque issuance services provided by Public Works and Government Services Canada and audit services provided by the Office of the Auditor General are not included as an expense in the department's Statement of Operations. There are other types of services that are not considered to be in the normal course of operation because they are not consistently provided without charge to all departments. These services include: accommodation, certain employee benefits, workers' compensation cost and legal services. The costs of these services have been included as an expense in the department's Statement of Operations in the following amounts:

(a) Services provided without charge:

	2008	2007
Employer's contribution to the health and dental insurance plans	32,813,109	38,283,629
Accommodation	38,784,367	37,479,902
Legal services	3,734,904	4,160,389
Workers' compensation cost	1,328,708	1,348,626
Total	**76,661,088**	**81,272,546**

(b) Payables and receivables outstanding at year-end with related parties:

	2008	2007
Accounts receivable from other government departments and agencies	4,221,244	11,180,556
Accounts payable to other government departments and agencies	15,602,355	17,434,454

14. Comparative information

Environment Canada required amendments to its previously approved Program-Activity Architecture (PAA). These amendments reflect the impact of Orders in Council transferring responsibility for the Toronto Waterfront Revitalization Initiative (TWRI) and the Harbourfront Centre Funding Program from the President of the Treasury Board to the Minister of the Environment. This transfer is reflected by the addition of 2 underlying program activities. Other Treasury Board approved amendments to the PAA resulted in the reclassification of 2 other program activities previously reported in 2006-2007.

As per Treasury Board Accounting Standards, the amounts have not been restated.

SECTION IV: OTHER ITEMS OF INTEREST

Strategic Integration Activities

Clear, consistent and integrated departmental policy advice, coordinated interactions with partners and stakeholders and effective communication are important tools to help Environment Canada deliver on its mandate and commitments.

The following discusses progress accomplished in key crosscutting activities pertaining to the strategic integration of Environment Canada programming.

Progress on International Environmental Agreements

The March 2008 *Status Report of the Commissioner of the Environment and Sustainable Development* (CESD) issued recommendations addressed to a number of departments. As Environment Canada is one of the lead departments responsible for international environmental agreements (IEAs), it was recommended that Environment Canada improve the information it was providing to Parliament and to citizens about the IEAs in which it is involved. To be more transparent and accountable in its actions, Environment Canada has accepted the recommendation to provide Parliament and Canadians with complete, understandable, and current information on objectives, means, expected results and results concerning IEAs for which it has the lead.

To do so, Environment Canada has decided to include IEA information on plans, priorities and activities in its annual *Report on Plans and Priorities* (RPP) and in the *Departmental Performance Report* (DPR). As such, reporting on these priorities is included in the appropriate Strategic Outcome section of this DPR. Environment Canada has also undertaken to regularly update progress on IEAs on the Environment Canada International Affairs Branch website. A description of IEAs led by the Department is now available on the International Affairs Branch's website and a compendium of international environmental agreements can be obtained by contacting the International Affairs Branch. An update of the compendium was launched in 2007–2008 and is expected to be completed in 2008–2009.

Progress on advancing strategic approaches to science and technology within the Department and externally

Environment Canada devotes a significant portion of its resources to science and technology (S&T). This S&T capacity is fundamental to delivering on the Department's mandate. Making the most of its S&T investments is a priority for Environment Canada, and the strategic management of these activities helps ensure we continue to deliver maximum results. One of the main tools the Department has been using to help manage its S&T is the Science Plan.

2007–2008 was the first year of implementation of Environment Canada's new long-term Science Plan. Significant progress has been made, and the main results of this year's work are outlined here. A new unit has been created within the Department that focuses on integrated monitoring and prediction (an area identified in the Science Plan as a strategic priority). This unit currently has projects on the Arctic, the Great Lakes and the St. Lawrence River. S&T management issues are also being addressed. In response to increased public interest in environmental issues and support for the use of science in environmental decision-making, the Department has made available on-line high-quality, user-friendly information on its S&T. The Department has also developed a framework to help measure the impact of its R&D, which will be implemented over the coming year. To provide career development opportunities for scientists, Environment Canada has partnered with other science-based departments and agencies to offer leadership development training to scientists who are interested in becoming managers. Environment Canada has also completed a series of regional science fora to enhance the coordination of its S&T activities across the country. Regional information sessions were also held on the Technology Plan, and efforts to

integrate this with the Science Plan will continue over the coming year.

Environment Canada was also active in ensuring that the Science Plan aligns with the federal Science and Technology Strategy, and with collaborations with other science-based departments and agencies on implementation of the Strategy. The Department is taking a leadership role in providing advice to government on directing resources to the four priority areas of the Strategy (of which environmental S&T is one), and is also involved in several other key strategy commitments including the Policy Research Initiative project to improve the government's ability to measure the impacts of its S&T investments.

Progress on effectively managing relations with other governments and partners in support of environment priorities

Environment Canada undertook several initiatives in 2007–2008 to manage partnerships with provincial, territorial and aboriginal governments and to engage stakeholders and Aboriginal peoples in the Government's environmental agenda. Consultations were undertaken with the provinces and Territories, Aboriginal organizations, and other stakeholders to further advance the Government of Canada's environmental agenda, including initiatives to reduce GHGs and air pollutants and improved chemicals management. The Department advanced many other intergovernmental environmental issues, such as municipal wastewater, air emissions and biodiversity, under the auspices of the Canadian Council of Ministers of the Environment (CCME) and the Canadian Councils of Resource Ministers (CCRM). Environment Canada concluded a Memorandum of Understanding on Environmental Cooperation with the four Atlantic provinces, which was signed in June 2008 by the five Ministers of the Environment.

The Department was actively involved in the negotiation and implementation of the environmental components of Aboriginal self-government and comprehensive land claim agreements and the implementation of the *First Nations Land Management Act*. Environment Canada also worked towards further streamlining internal policies that impact its relationships with partners, stakeholders and Aboriginal peoples, such as initiating the implementation of a policy framework for managing grants and contributions and departmental policies on Aboriginal consultations and public participation in decision-making.

Corporate Services and Corporate Management Activities

Integrated and effective corporate services help Environment Canada to carry out its mandate. Environment Canada continues to place significant effort into repositioning its corporate services to better support results-based management and achieve value for money for Canadians.

The following discusses progress accomplished in key cross-cutting corporate activities that enable Environment Canada's programming.

Progress on the Management Accountability Framework

The Management Accountability Framework (MAF) sets out Treasury Board's expectations for sound management in the public service. A group of the Treasury Board Porfolio[27] (TBP) conducts an annual MAF assessment of each department and agency to evaluate management performance and capacity. At Environment Canada, the results and recommendations of the assessments contribute towards strengthening management

[27] *Treasury Board Portfolio* refers to the suite of organizations through which the Treasury Board fulfils its responsibilities.

accountability and improving management performance.

The 2006–2007 Round IV MAF assessment identified two key management priorities for Environment Canada to address in 2007–2008:

1. **Improving the Corporate Management Structure** – Environment Canada responded by setting in motion a risk-based Corporate Business Plan for 2008–2009, and by strengthening the reporting of performance expectations in the Report on Plans and Priorities tabled in Parliament each year.
2. **Information Technology Management** – In 2007–2008, the Department strengthened its governance of information technology (IT) management and developed an IT strategic plan framework document that will be used as a foundation for the development of an IT strategic plan.

The 2007–2008 Round V MAF assessment recognized EC's improvement in some key management areas, including the following:

1. **Corporate Risk Management** – TBP acknowledged the Department's efforts to improve its Corporate Risk Profile (CRP) by clarifying linkages to business planning. Environment Canada expects to build on the CRP and develop an integrated risk management approach for the Department.
2. **Asset Management** –Environment Canada was commended for launching an integrated department-wide approach to investment planning. Environment Canada's participation in the TBS-led Investment Policy Implementation pilot positions the Department to be a leader in this area.

In addition, Environment Canada received a "strong" rating in 2007–2008 for its work on values and ethics and learning and development. In 2007, Environment Canada conducted its first Employee Values and Ethics Survey. Following an analysis of the results, the Department developed an action plan to improve its performance in a number of areas, including the development of on-line training on values and ethics as part of its core learning requirements and the development of a guide for employees regarding fear of reprisal. With respect to learning and development, Environment Canada developed an internal learning policy and 92 percent of Environment Canada employees completed a learning plan.

As a result of the 2007–2008 assessment, the Treasury Board of Canada Secretariat (TBS) identified two key areas of focus for 2008–2009:

1. **Corporate Performance Framework:** It was indentified that Environment Canada must continue to refine and strengthen its Strategic Outcomes and Program Activity Architecture (PAA) to ensure compliance with the Management, Resources and Results Structure Policy. The goal of this policy is to improve the effectiveness and efficiency in managing public resources by linking resources to expected results in program areas.
2. **Expenditure Management:** Environment Canada is encouraged to focus on improving its ability to forecast and manage its expenditures and budget allocation process so that budgets are allocated earlier in the fiscal year.

In addition, Environment Canada plans to make progress in the areas of business continuity planning, classification monitoring and the management of information. Overall, Environment Canada will continue to act upon the recommendations of the MAF assessments to improve its management practices.

Progress on implementing the Management, Resources and Results Structure policy.

Environment Canada continues to adapt its results-based management approaches to the TBS's Management, Resources and Results Structure (MRRS) policy.

Environment Canada has been working to remodel its results structure into a Program Activity Architecture (PAA) that is fully compliant with MRRS, and to develop a performance measurement framework (PMF) that meets the requirements of this policy.

Progress on information management and information technology activities

For many organizations, information management (IM) and information technology (IT) are crucial elements of operations. This is especially true for Environment Canada as a result of the scientific

and technical nature of its operations and the need for reliable 24/7 support of mission critical weather forecasting and reporting data.

Over the past year, in addition to delivering infrastructure and core services (email, office suites, financial and human resources applications, and library services), the Chief Information Officer Branch (CIOB) has been ISO certified for specialized IM and IT processes supporting Weather and Environmental Services. The CIOB has also been actively involved in research and development of specialized software for program activities. This has required extensive collaboration with international organizations and has led to the definition of standards and the development of new technologies that clearly demonstrate Environment Canada's leadership and innovation in forecaster workstation design and standards.

To deliver IM and IT services effectively, the CIOB must maintain alignment of resources with departmental priorities. In 2007, the CIOB began to develop a portfolio management approach that would ensure good communication at all levels and thus create closer ties with its clients and partners within the Department. The implementation of this approach in 2008 has enjoyed a very positive early response.

Key governmental priorities such as the Management Accountability Framework have been used to guide the CIOB in improving its IM and IT governance. Advancement of the IM program in 2007 was marked by the approval of the IM strategy, the collaborative development of client-funded IM proposals, and the drafting of a future state vision and roadmap for IM at Environment Canada which will be used as a framework for a three-year tactical plan starting in 2008–2009. Parallel work has also been done for IT with the development of an IT strategy framework document which will be used to further develop the IT strategy and supporting implementation documents. Other initiatives in 2007–2008 include the planning and development of an e-document management and collaboration service to be rolled out in 2008–2009, participation in the TBS Integrated Investment Planning pilot, approval of an IT greening policy, and the commencement of the Oracle Financials software upgrade.

The Department continues to make strategic investments in evolving technologies and capacity. Planning is in progress to upgrade Environment Canada's supercomputing facilities. Compliance with Management and Information Technology Security (MITS) requirements is improving. Preliminary work on building a consolidated performance metrics and reporting framework has begun. Work is progressing on the implementation of the next version of PeopleSoft, which is scheduled to be completed in the 2009–2010 fiscal year, although full functionality will require additional funding.

Progress on moving forward on integrated human resource business planning

The Clerk of the Privy Council highlighted in the 14th Annual Report to the Prime Minister the need for integrated business and human resources planning as the basis for meeting public service business goals. Through integrating business planning with human resources planning, departments would develop a better sense of their strengths and of the gaps that they would need to fill, whether through recruitment or development or by bringing in specialized skills at mid-career.

In response to the Clerk, the Department developed and published on its intranet a document entitled "2007/2008 Summary of Branch Human Resources Plans and Strategies for Common Issues". The Summary represented the first efforts by Environment Canada managers to link their human resources needs to the business goals of the Department. Through this exercise, the Department identified opportunities to improve and expand its own integrated business and human resources planning process to include a comprehensive listing of HR themes as well as financial, IM/IT and accommodations considerations. This improved process was later used as the basis of the 2008–2009 integrated business and human resources planning cycle that began in late 2007.

In parallel to the 2007–2008 departmental integrated business and human resources planning process, the Executive Services group, in coordination with the Executive Resourcing Committee (EXRC), formally undertook a department-wide succession review of its executive cadre and its EX-01 feeder groups. This process will help ensure that in the future

Environment Canada will have a competent and stable leadership cadre to direct departmental efforts towards meeting the Government's business goals.

Progress on audit and evaluation activities

Environment Canada's Audit and Evaluation Branch plays an important role in improving the effectiveness and efficiency of departmental policies, programs and management. In 2007–2008, the Branch undertook several initiatives to strengthen the internal audit, evaluation, and strategic planning and coordination functions.

Among the key highlights was the creation of a three-member, independent External Audit Advisory Committee (EAAC) to advise the Deputy Minister and provide oversight to the internal audit function. The Branch continued working towards providing an annual holistic opinion to the Deputy Minister on departmental controls, governance and risk management, which is expected in the spring of 2009.

The Branch also established a Departmental Evaluation Committee (DEC), chaired by the Deputy Minister, to provide oversight to the evaluation function. The Branch started early planning for the updated Treasury Board Secretariat (TBS) Evaluation Policy, which is expected to come into force in the fall of 2008.

Measures were also taken to further strengthen the Audit and Evaluation Branch's capacity through the appointment of a director for the Strategic Planning and Coordination division. This division is responsible for developing annual risk-based audit and evaluation plans, annual reports and quality assurance processes, as well as the provision of secretariat support to the EAAC and DEC. It also plays a liaison, coordination and support role for Environment Canada's involvement in external audits and studies, provides an annual update on audit recommendations to the Office of the Auditor General, and assists departmental managers in responding to environmental petitions from the Commissioner of the Environment and Sustainable Development.

Progress on official languages

In 2007–2008, several initiatives related to the management of the official languages program in Environment Canada were implemented. The Executive Management Committee approved the Guiding Principles on the Roles and Responsibilities concerning the *Official Languages Act* in September 2007. A new Official Languages Champions network composed of Environment Canada managers from all regions was also created. The members of the Official Languages Champions network collaborate in enhancing the Department's linguistic agenda by supporting the three departmental champions for the implementation of parts IV, V, VI and VII of the *Official Languages Act*. Environment Canada is committed to creating and maintaining a work environment that is conducive to the use of both official languages. To facilitate this in the context of horizontal teams, a series of reference tools for conducting bilingual meetings was published during the summer of 2007. These tools include a guide to conducting a meeting in both official languages, guides for bilingual meeting reminders and a checklist for the chairs and participants at such meetings.

To ensure its compliance with regard to services to the public (Part IV) and language of work (Part V), the Department also identifies and monitors on an ongoing basis, employees appointed through non-imperative staffing. This process aims at ensuring that these employees have access to and complete their language training within the timeframe prescribed by the Public Service Official Languages Exclusion Approval Order.

In order to enhance the vitality of the official-language minority community (OLMC) (Part VII), Environment Canada has also launched a pilot project in the Atlantic region in 2007. The pilot project is based on an initiative brought forward by the Fédération acadienne de la Nouvelle-Écosse (FANE), which is developing a new theme on the environment and sustainable development.

Indicators of Environmental Sustainability

Environment Canada, Statistics Canada and Health Canada are working together to further develop and communicate national environmental indicators of air quality, greenhouse gas emissions and freshwater quality—measuring sticks that can track progress by governments, industries and individuals in protecting and improving the environment. These indicators are reported in the *Canadian Environmental Sustainability Indicators (CESI)*[28].

CESI brings together environmental information from federal, provincial and territorial governments, which share responsibilities for environmental management in Canada. Consequently, the trends and values of these indicators are not solely attributable to Environment Canada's actions, but indicative of the environmental results achieved collectively by various levels of government as per their responsibility for the environment.

The table below provides an overview of the latest measurements for key indicators of environmental sustainability.

Trend	Indicator	Overview
Declining ▼	Air quality	Nationally, ground-level ozone exposure increased approximately 11% from 1990 to 2006; however, the rate of increase has slowed over this period. Ground-level ozone is a key component of smog and one of the most harmful air pollutants to which people are exposed. Ozone is an important indicator of air quality because there are currently no established thresholds below which it does not pose a risk to human health.
No Trend —	Freshwater quality	Freshwater quality of Canada's surface waters has been evaluated with respect to the ability to support aquatic life – the most sensitive requirement of this resource. For 377 sites monitored across southern Canada from 2004 to 2006, water quality was rated as "excellent" at 6 percent of sites, "good" at 42, "fair" at 29 percent, "marginal" at 18 and "poor" at 4 percent.
Declining ▼	Biodiversity[29]	As of May 2008, the status of 205 species previously determined to be at risk had been reassessed. Of these, the status of 58 species worsened (28.3%), whereas 30 species (14.6%) were determined to be no longer at risk or placed in a lower risk category.
Declining ▼	Greenhouse gas emissions	Canadian greenhouse gas emissions decreased slightly from 2004 levels but overall emissions in 2006 were approximately 21.7% greater than the 1990 level.

[28] Environment Canada, *Canadian Environmental Sustainability Indicators*
www.environmentandresources.gc.ca/default.asp?lang=En&n=2102636F-1

[29] Biodiversity is not included in CESI. This indicator of environmental sustainability was provided by the Canadian Wildlife Service.